

Stockholders Lose In TVA's Purchase Of Tennessee Utility

KNOXVILLE, Tenn.—Officials of the Tennessee Public Service Co. estimate that if the company is purchased by the Tennessee Valley Authority, holders of preferred stock in the utility will receive between \$35 and \$40 per share, while owners of common stock will receive nothing.

Bondholders have been asked to turn in their holdings at 96½ by Aug. 21, and five representatives of "a very substantial amount" of the bonds have indicated that they will surrender their bonds by the dead line, and are urging other bondholders to do likewise.

Arrangements for paying bond—and stockholders if and when the deal with TVA is consummated were explained in a letter from R. W. Lamar, T.P.S. vice president, to representatives of major bondholders. Parts of the letter follow:

"By reason of action taken by the City of Knoxville looking to the establishment of a municipally owned and operated electric system to be supplied with electricity by the Tennessee Valley Authority and financed by loans and donations from the Federal Public Works Administration, the Tennessee Public Service Co. a few months ago found itself faced with the alternative of selling its electrical properties to public authority or entering upon competition with them. Such competition would be disastrous to the company and its security holders . . .

"After the completion of the sale and taking care of the bondholders from the cash proceeds of the sale and from cash on hand, the company will be left with cash and with its street railway and bus properties and some miscellaneous properties of only salvage value.

"It is estimated that after paying expenses incident to the sale and deducting \$300,000 for pending bus substitutions, working capital, and reserve for the transportation properties, this will leave cash and other quick assets amounting to between \$35 and \$40 per share for the 55,000 shares of preferred stock and nothing for the common stock."

Leonard's Movie Helps Sell 'Lost' Prospect

PONCA, Okla.—E. Wilkerson, manager of the Oklahoma Tire & Supply store here, Leonard dealer, had given up trying to sell one particular prospect when a salesman for Spurrer's, Inc., Leonard distributor, happened in, carrying a picture projector and several films.

The Spurrer man was on his way to a nearby town, but at Wilkerson's request left his demonstrating equipment behind. Wilkerson phoned the "lost" prospect, induced her to pay one more visit to the store, and then staged a talking picture performance for her exclusive benefit.

After seeing "Gentlemen Prefer Beef" and "Pie Takes a Holiday," she bought one of the highest-priced Leonard models.

Frozen Desserts' Place On Menu Described By Joan Adams

DETROIT—Frozen desserts are defined and their proper place on the menu is described by Joan Adams of the Kelvin Kitchen in a recent issue of *Kelvinator Cookery*.

An ice, as Miss Adams defines it, is a flavored, sweetened water, usually made with fruit juices and frozen. A sherbet is an ice to which a meringue of egg-whites or cream is added when it is removed from the freezing tray to be beaten.

Ices and sherbets are frozen firm and their texture should be airy and smooth, says Miss Adams.

A *frappe* is an ice made with a sugar syrup, which is frozen without being cooked, and served only partially frozen, while "mallowy" in texture.

A *mousse* is a flavored, sweetened, whipped cream combination which requires no stirring while freezing. A *parfait* is a similar mixture prepared with a cooked syrup base and egg whites.

Ices may be served at an elaborate breakfast, to accompany the meat course at a formal dinner, or as dessert to offset a rich, heavy meal. They appear in solo form at receptions and teas, often with meringue and macaroon crumbs to add richness, and accompanied by small cakes.

A *mousse* or *parfait* may form the dessert course of a light dinner, the main course of which has been fish or salad. Either may be served with a drop cookie, a liche-light wafer or macaroons, at a bridge luncheon or when guests drop in. These whipped cream dishes are rich and should be served in moderate portions with a simple accompaniment, according to Miss Adams.

On the whole, says Miss Adams, ices and sherbets are more appealing to those who must count calories, or balance a budget strictly, or consider the digestive apparatus of youngsters.

Judson Burns Salesmen Win Atlantic City Trip

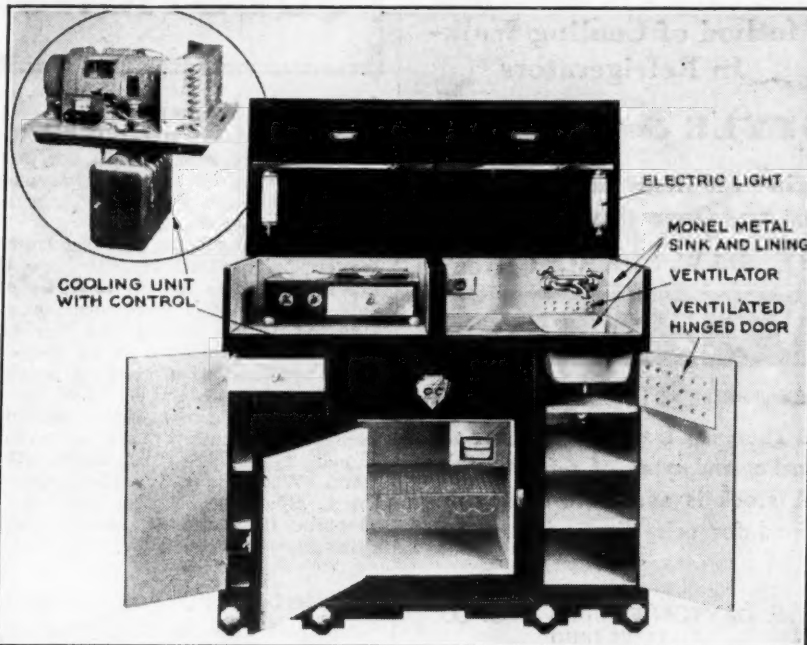
PHILADELPHIA—During a recent six-week sales contest sponsored by Judson C. Burns, G-E distributor here, for salesmen and store managers in his territory, \$450,000 worth of appliances were sold, and 108 contestants made their quotas. Winners were given a free trip to Atlantic City.

Leading salesman in the competition was Clarence Samsel, who sold \$6,005 worth of merchandise. Leading outlet was a department store having a General Electric resale operation.

Electrolux Salesmen Vie For Silverware

EVANSVILLE, Ind.—Electrolux refrigerator salesmen throughout the country are now in the midst of a "Silver Award Campaign," at the culmination of which, on Sept. 30, winners will receive silverware sets, size of which will be determined by the number of sales made by each man. The drive opened Aug. 1.

An Entire Kitchen in One Piece



The above pictured cabinet, manufactured by the Electric Invisible Kitchen Co. of Chicago, has all the elements of a kitchen. The refrigeration unit, shown in the inset, is made by Major Appliance Corp.

Sacramento Distributor Will Move Offices

SACRAMENTO, Calif.—Kimball-Upson Co., distributor of electrical appliances here, will move to a new location at Eleventh and K Sts. shortly after Sept. 1. The new headquarters, which are considerably larger than those used at present, are undergoing extensive remodeling. The company has been operating 44 years.

Dealer Sends Promotion To All New Parents

LONG BEACH, Calif.—To all homes in this city visited by the stork, the McCrery Music Co., Electrolux dealer here, sends a mailing piece in which the parents are first congratulated, then reminded that the baby's food should be given every protection. The card suggests that Electrolux be selected for the job.

Electrical Industry Authority Approved

WASHINGTON, D. C.—National Recovery Administrator Hugh S. Johnson has just announced approval of the personnel of the Code Authority for the electrical manufacturing industry.

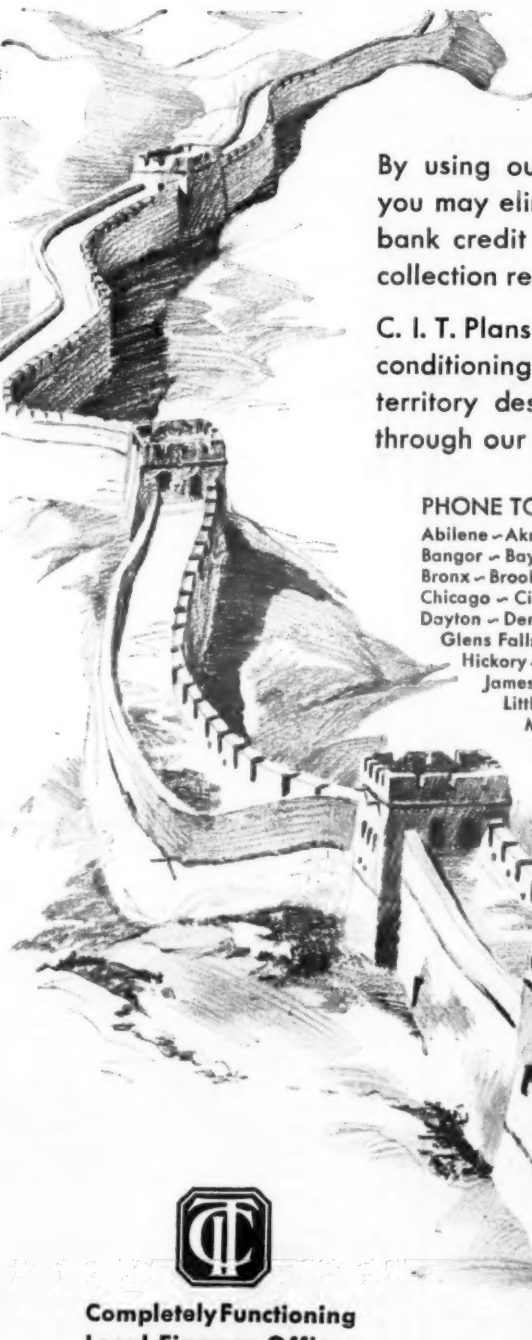
Members of the Code Authority are as follows:

Wylie Brown, New York City; A. D. Byler, Chicago; Clarence L. Collins, Cleveland; J. R. Cook, Hartford, Conn.; H. B. Crouse, Syracuse, N. Y.; R. Edwards, New York City; Otto H. Falk, Milwaukee; F. R. Fishback, Cleveland; R. H. Goodwillie, Yonkers, N. Y.; F. C. Hodkinson, New York City; F. C. Jones, New York City; B. W. Kerr, Greensburg, Pa.; A. L. Lindemann, Milwaukee; F. W. Magin, Milwaukee; G. W. Mason, Detroit; F. A. Merrick, East Pittsburgh; S. L. Nicholson, New York City; C. L. Pierce, Jr., Pittsburgh; D. G. Phelps, Hartford, Conn.; P. B. Postlethwaite, St. Louis; Walter Robbins, New York City; R. J. Russell, St. Louis; E. O. Shreve, Schenectady; W. E. Sprackling, New York City; C. H. Strawbridge, Chicago; Gerard Swope, New York City; J. S. Tritle, East Pittsburgh; J. R. Trumbull, Plainville, Conn.; H. S. Walker, Conshohocken, Pa.; J. F. Wright, Newark, Del.

Driscoll Moves Offices And Sales Quarters

CHARLOTTE, N. C.—General offices of L. W. Driscoll, Inc., G-E distributor, have been moved to the fourth floor of the Law building at 730 East Trade St. here. Until Sept. 1, the company will maintain its retail store at 719 South Tryon St. in this city, at which time it will be moved to 200 North Tryon St.

Your profit **PROTECTED** by C.I.T. Finance Service



By using our complete Refrigerator Financing Service you may eliminate much overhead expense, retain your bank credit line free for other needs, and better your collection results.

C. I. T. Plans cover refrigerators, electric ranges, and air conditioning equipment. Have our representative in your territory describe the current service features offered through our Local Office nearest you, at lowest cost.

PHONE TODAY THE NEAREST C.I.T. OFFICE

Abilene - Akron - Albany - Altoona - Amarillo - Asheville - Atlanta - Augusta - Bakersfield - Baltimore - Bangor - Bay Shore - Beaumont - Beckley - Binghamton - Birmingham - Boston - Bridgeport - Bronx - Brooklyn - Buffalo - Butte - Camden - Cedar Rapids - Charleston - Charlotte - Chattanooga - Chicago - Cincinnati - Clarksburg - Cleveland - Columbia - Columbus - Cumberland - Dallas - Dayton - Denver - Des Moines - Detroit - El Paso - Erie - Florence - Fort Wayne - Fort Worth - Fresno - Glens Falls - Greensboro - Greenville - Hagerstown - Harrisburg - Hartford - Hempstead - Hickory - Houston - Huntington, N.Y. - Huntington, W.Va. - Indianapolis - Jacksonville - Jamaica - Jamestown - Jersey City - Johnson City - Kansas City - Knoxville - Lexington - Lincoln - Little Rock - Los Angeles - Louisville - Manchester - Memphis - Miami - Milwaukee - Minneapolis - Montgomery - Montpelier - Mt. Vernon - Muncie - Nashville - Newark - Newburgh - New Haven - New Orleans - New York - Norfolk - Oklahoma City - Omaha - Orlando - Paducah - Paterson - Peoria - Perth Amboy - Philadelphia - Pittsburgh - Pittsfield - Portland, Me. - Portland, Ore. - Portsmouth - Poughkeepsie - Providence - Raleigh - Reading - Reno - Richmond - Roanoke - Rochester - Rome, Ga. - Sacramento - St. George - St. Louis - Salt Lake City - San Antonio - San Bernardino - San Diego - San Francisco - San Jose - Scranton - Seattle - Shreveport - Spokane - Springfield, Mass. - Springfield, Ohio - Stockton - Syracuse - Tallahassee - Tampa - Toledo - Tucson - Tulsa - Uica - Washington - Watertown - Wheeling - White Plains - Wichita - Wilkes-Barre - Wilmington - Wilson - Youngstown

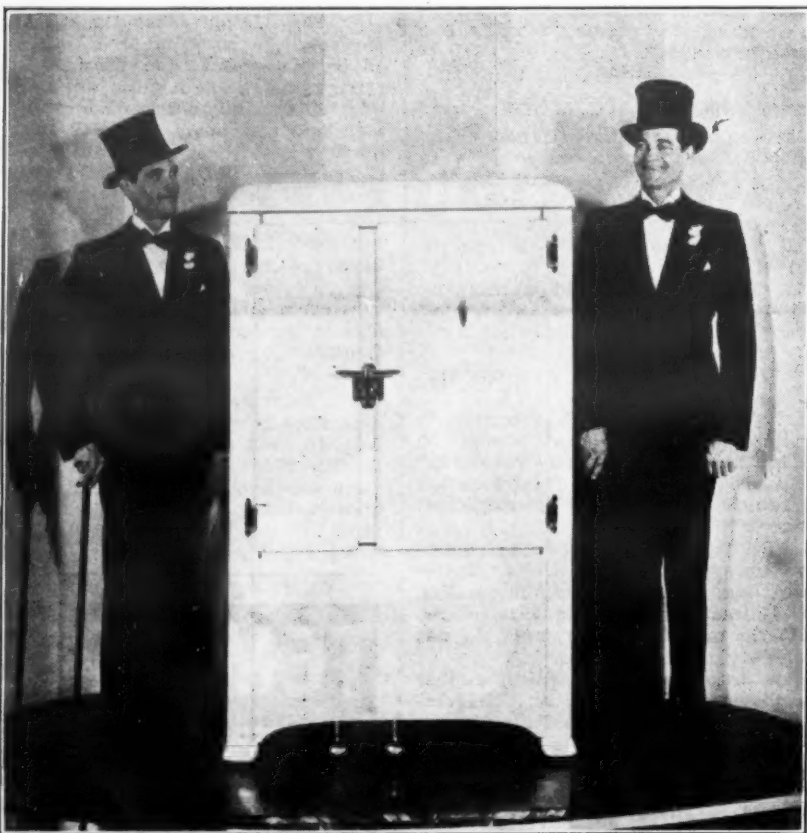


Completely Functioning
Local Finance Offices
in the Principal Cities

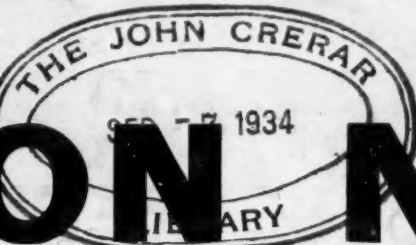
C.I.T. CORPORATION
NEW YORK — CHICAGO — SAN FRANCISCO

A Unit of COMMERCIAL INVESTMENT TRUST CORPORATION—CAPITAL AND SURPLUS OVER \$70,000,000

Stretching for Leonard



On the left, Clarence Willard, nationally famous stage star, and on the right the same Mr. Willard a moment later. One of the principals in Leonard Refrigerator Co.'s Century of Progress exhibit, Mr. Willard, with his astonishing "growing" feats, delights the crowds that gather for his hourly performances in the air-conditioned Leonard Theater.



REFRIGERATION NEWS

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DETROIT, MICHIGAN, SEPTEMBER 5, 1934

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matter Aug. 1, 1927THREE DOLLARS PER YEAR
TEN CENTS PER COPY

EH&FA Extends Financing Plan To Entire Line

Use of the TVA Emblem Is Restricted to Low Cost Models

CHATTANOOGA, Tenn.—Low-cost financing of domestic electric appliances by the Electric Home & Farm Authority has been extended to the complete line where a manufacturer has an approved TVA model, George D. Munger, EH&FA commercial manager, announced last week.

Henceforth, if a manufacturer has an approved TVA-emblem refrigerator, all sizes of refrigerators manufactured by him may now be purchased on the EH&FA financing plan in communities served by TVA power.

If a manufacturer has an approved appliance in all three classifications of appliances now financed by EH&FA—refrigerator, range, and water heater—all models of these types, regardless of size, will be procurable on EH&FA customer-financing.

Use of the emblem, however, will be restricted to the low-cost appliances, as is the present practice.

At the same time, it was announced that the new contracts with manufacturers are altered so that retail dealers apply directly to the EH&FA to take part in the program. Manufacturers are relieved of liability on the time-payment contracts.

"This marks an improvement over the original plan," Mr. Munger said. "Since we are right here on the ground, we are better informed and more conveniently situated to negotiate with retail dealers. Henceforth, dealers wishing to cooperate in this plan will work directly with the EH&FA."

Mr. Munger stated that Miller Brothers, Chattanooga department store, had entered into an appliance contract with the EH&FA.

Combination Sales Violate NRA Code

WASHINGTON, D. C.—Combination sales of merchandise, typical of which is the "One-Cent Sale," and the sale of merchandise upon a condition involving the element of chance, similar to what is commonly known as the "Suit Club Plan" will henceforth be regarded as violations of the retail code.

Provisions covering such transactions were included in amendments to the code approved last week by the NRA.

The prohibition of combination or group sales is an addition to the code's article on loss limitation. It provides that "in group offerings or sales of merchandise, the selling price of the group shall not be less than the sum of the minimum selling prices of the individual items of the groups," as determined in accordance with provisions already in the code.

It is added that "in group offerings or sales of merchandise, where the selling price of one or more items of the group is indicated, the price indicated for each item or items, expressly or by inference, shall not be less than the minimum price of each item or items."

The amendment provides that the added section shall not be construed (Concluded on Page 11, Column 5)

Servel Inc., Reports \$785,204 Profit For Quarter

EVANSVILLE, Ind.—Servel, Inc., reports a net profit of \$785,204 for the quarter ended July 1, as compared with a net profit of \$608,719 in the same quarter last year.

For the first three-quarters of the fiscal year the net profit was \$607,268, after all charges including a reserve of \$500,000 set up at the end of the second quarter, as compared with a net profit of \$33,921 for the same period last year.

Coil Patent May Bar S. Africa Sales

JOHANNESBURG, Union of South Africa—Herbert F. Nicholls, refrigerating engineer with offices at 71 Goldman St., Florida, Transvaal Province, Union of South Africa, has made application for a patent on finned coils, which if granted may prevent American manufacturers from exporting finned coils to South Africa.

In his application Mr. Nicholls declares:

"This invention relates to the tube coils provided for heat interchange in refrigerating and cooling plants, consisting of metal tubing coiled to various forms and provided with traverse fins to enhance conduction of heat between tubing and atmosphere surrounding it.

"Heretofore it has been customary for such coils to be manufactured abroad and imported into the Union of South Africa, as complete coils of specific form necessary for a particular refrigerating or cooling plant; the coils for different sizes and makes of plants being seldom interchangeable. "The purpose of the present invention is to facilitate the local manufacture of coils of various sizes and forms.

"According to this invention there are provided straight tubular finned units, which, by means of connection bends or headers, are readily assembled to make complete coils."

Upon opposition by the Transvaal Chamber of Mines of Johannesburg that the alleged invention is not proper subject matter for a grant of letter on the grounds that it is not novel, Mr. Nicholls amended his application to read as follows:

"This invention relates to the tube coils provided for heat interchange in refrigerating and cooling plants more particularly plants for preserving food and beverages, but not including plants for conditioning mine air."

Mr. Nicholls sums up his claim of invention in his specifications for letters patent No. 1082/32 as follows:

"1. A unit for forming tube coils for refrigerating and cooling plants 'except plants for conditioning mine air' comprising a straight tube or a group of several straight tubes arranged parallel with one another, and a number of spaced fin plates mounted thereon parallel with one another and so as to be in good heat transmitting contact with the tube.

"2. A unit as claimed in claim 1, in which the fin plates are punched out to form transverse annular flanges fitting closely onto the tube or tubes.

"3. A tube coil for refrigerating and cooling plants comprising a number of units as claimed in claim 1 or 2 connected by bends or headers.

"4. The improvements in tube coils for refrigerating and cooling plants substantially as described."

D.W. May Plans Introduction of Household Line

Former N. Y. Distributor Also Plans to Make Air Conditioners

NEW YORK CITY—D. W. May, widely known in the east as a merchandiser of electrical appliances, has entered into the manufacture of household electric refrigeration, air conditioning, and radio products.

Products of the May Radio & Refrigeration Corp. will have their initial public showing Sept. 19 to 29 at the National Electrical Exposition to be held here in Madison Square Garden.

Mr. May has intimated that the refrigeration line will incorporate a patented door feature, while the radio line will feature a chromatic dial, an exclusive May patent.

Production on the electric refrigeration models will start shortly, with units ready for October delivery. Production has already been started on the radio line.

Manufacturing will be carried on in the May building at New St. and Morris Ave., Newark, N. J., with general administrative offices at 551 Fifth Ave., New York City.

Personnel of the new organization, in addition to Mr. May, includes Nate Hast, vice president in charge of sales; Herman Rose, production manager; R. L. Kirse, refrigerating engineer; Frank M. Squire, radio engineer, and Charles P. Englehardt, advertising and sales promotion manager.

Mr. May has merchandised Majestic, Crosley, and Philco products in the metropolitan New York and New Jersey markets. At one time he claimed the title of being the "world's largest radio distributor" and is said to be the originator of the "dealer trip" idea, taking more than 500 retailers to Bermuda one year and to Cuba the next.

Mr. Hast has been sales manager of the Shamrock Mfg. Co. and of Roskin Brothers, Philco wholesaler at Middletown, N. Y.

Mr. Rose was formerly president of the Shamrock Mfg. Co. Mr. Englehardt has been associated with Mr. May for some time and at one time was connected with the advertising department of Brunswick-Kroeschell Co.

Washer & Ironer Code May Limit Guarantees

WASHINGTON, D. C.—The Code Authority for the washing and ironing machine manufacturing industry has made a formal request that its code be amended to limit guarantees to a period of one year.

Other proposed code changes seek to prohibit misleading advertising of the industry's products. The proposed advertising clauses follow very closely those suggested by the NRA Consumers' Advisory Board.

Present abuses in the industry, necessitating strict control of sales promotion methods, were outlined by J. P. Bohnen, executive secretary of the American Washing Machine Manufacturers Association, and G. F. Brewer, representing the Code Authority. They introduced advertisements taken from daily newspapers to prove their points.

Hiter to Supervise Stewart-Warner Radio Sales

CHICAGO—Stewart-Warner Corp. last week announced a number of changes in the personnel of its sales and advertising divisions.

Frank A. Hiter, vice president and general sales manager, took over direct supervision of radio sales, replacing O. F. Jester, resigned.

A. B. Dicus was appointed sales promotion manager and M. H. Thompson has been made assistant to F. R. Cross, advertising manager.

White Mountain Line Offers Color Choice

NASHUA, N. H.—Maine Mfg. Co. this season is manufacturing a White Mountain household refrigerator line comprising five models which range in size from 4.85 cu. ft. in net capacity to 11 cu. ft. Cabinets, available in a variety of colors, are conventionally styled, with broom-high legs and top-mounted units.

The 4.85-cu. ft. model, designated as M-45, has a shelf area of 9 sq. ft., and its two trays freeze 49 ice cubes weighing 5 lbs. In exterior dimension, it is 25 in. wide, 21 in. deep, and 58 in. high. This and all other models in the line have sliding shelves, a vegetable crisper, a rubber ice tray, and nine-point temperature control on the evaporator.

Model M-57 has a net food storage space of 6.2 cu. ft. and a 10-sq. ft. shelf area. It is 28 in. wide, 23½ in. deep, and 61½ in. high, and has two trays freezing 49 ice cubes. Net capacity of the third model, M-70, is 7.46 cu. ft., and its shelf area is 13 sq. ft. In its three trays it freezes 77 cubes weighing 8 lbs. Its dimensions are: width, 32½ in.; depth, 23½ in.; height, 61½ in.

Two largest models in the line have double doors and twin evaporators. One is model 90, with a 9-cu. ft. net capacity and a shelf area of 14.55 sq. ft. Ice trays hold 10 lbs. of ice, 105 cubes. It is 39½ in. wide, 23½ in. deep, 61½ in. high. Model 110, with a storage capacity of 11 cu. ft., has a shelf area of 18.35 sq. ft. and makes 161 ice cubes weighing 16 lbs. It is 47 in. wide, 23½ in. deep, and 61½ in. high.

Bear Joins Fairbanks-Morse Sales Staff

CHICAGO—Henry Bear, formerly connected with Grigsby-Grunow Co. and with Zenith Radio Corp., has been named assistant sales manager of Fairbanks-Morse Home Appliances, Inc., manufacturer of Fairbanks-Morse electric refrigerator and other electrical appliances.

Refrigerator Tax Totals \$1,075,149 for July

WASHINGTON, D. C.—During July of this year collections from manufacturers of mechanical refrigerators totaled \$1,075,149 compared with \$893,008 for the same month in 1933, according to a report of Federal excise tax collections made public recently by the U. S. Internal Revenue Department.

NRA Code for Distributors Is Now in Effect

Pact Governs Wholesaling Functions of Electrical Appliance Distributors

WASHINGTON, D. C.—The NRA last week made available first printed copies of the supplementary code of fair competition for the electrical wholesale trade, which code went into effect Aug. 23.

This code is supplemental to the general wholesaling code, and applies to wholesalers and distributors of electrical appliances and apparatus, with the exception of wholesalers of radio supplies and apparatus. A special code for radio wholesalers was approved some time ago.

The code specifically points out that it applies to wholesaling functions only, and not to the retailing function of a distributor who sells at both wholesale and retail.

Article IV dealing with trade practices governs such practices as the quoting of lump sum prices, quantity

Text of the approved NRA code of fair competition for electrical wholesalers is published on page 13 of this issue.

discounts, freight charges, shipping on consignment, accepting returned goods without a service charge, removing name plates, special discounts, and cooperative advertising.

Provision is also made for the setting up of a Trade Practice Committee, which shall formulate fair trade practices governing manufacturer-distributor relationships.

Administration of the code will be by a Code Authority consisting of 11 members, eight to be nominated by the executive committee of the National Electrical Wholesalers Association and three to be elected by members of the trade who are not members of the association in a manner to be approved by the Administrator.

Code commissions will also be appointed for various districts throughout the country to assist in the administration of the code.

Commonwealth Sells 11,336 TVA Models

BIRMINGHAM, Ala.—A total of 11,336 TVA-model electric refrigerators, ranges, and water heaters had been sold up to Aug. 1 in territories served by the Commonwealth & Southern Corp., W. M. Stanley, vice president in charge of sales of the Alabama Power Co., declared recently. Commonwealth & Southern has operating subsidiaries in Georgia, Alabama, Tennessee, Florida, Mississippi, and South Carolina.

The Commonwealth & Southern companies have mapped out a program which contemplates the sale of 214,885 major electric appliances bearing the TVA emblem. This would increase the average annual use of electricity per domestic customer to 1,800 kwh.

In order for this goal to be reached 136,266 electric refrigerators, 53,915 ranges, and 24,765 water heaters must be sold in addition to a considerable volume of minor appliances.

Campaigns and Sales Drives Keep Kelvinator Sales and Advertising Officials Busy at Main Offices



(1) R. I. Petrie, Kelvinator sales manager, greets the visitor with a smile. (2) Charles van Maanen, Kelvinator oil burner sales manager. (3) Mr. van Maanen checks his distribution

map. (4) H. H. Dobbertein, domestic advertising, queries a co-worker. (5) George Wilcock, editor of "Cold Facts," leaves his bottle of chocolate milk to engage in a heavy phone

conversation. (6) J. A. "Doc" Harlan, commercial sales manager, introduced Kelvinator's "Exact Selection" commercial sales plan this year.

A DIGEST OF THE CORPORATE HISTORY OF THE REFRIGERATION INDUSTRY

A Preliminary Compilation of Names, Dates, Products and Other Significant Facts Pertaining to Various Manufacturing Enterprises Which Have Been Identified with the Development of The Refrigeration Business

Copyright, 1934, by Business News Publishing Co., Detroit, Mich.

So far as we know, this review of corporate development in the refrigeration industry is the first compilation of its kind ever published. It is by no means complete and may not be entirely accurate. For example, it does not include any of the well-known names of the companies now active in the field. The objective in this editorial assignment was to get on record all the essential facts regarding a great many concerns which are no longer active in the manufacture of refrigeration equipment, while the data are still available.

The history of the present manufacturers is, of course, the most important part of a complete record of this kind, but since the facts in connection with these companies are more easily obtainable, we plan to make a separate project of the research into the beginnings of the current companies.

Many interesting facts regarding the pioneers in refrigeration development are brought out in this instalment. No doubt, much additional information could be added to make the record more complete. Readers are invited to supply additional data or make correction of any errors.

While the major share of the companies listed are now defunct, the record contains names of a great many companies which are still active in other fields, as well as the names of many products which have been acquired by other companies and which are still being produced in quantities. Even in the case of several units which are no longer being manufactured, it will be noticed that parts and service are still available.

This compilation required many hours of patient research. Bound volumes of ELECTRIC REFRIGERATION NEWS, correspondence files, patent records, and other literature have been culled for data. The job of correlating this information has been much like that of fitting together a jig-saw puzzle.

Oldtimers in the business have been interviewed, and many letters written in an effort to fill in missing facts and figures. It is hoped that the publication of this material will inspire many readers who are personally acquainted with the activity of pioneering organizations to send in additional data to complete the records of these concerns.

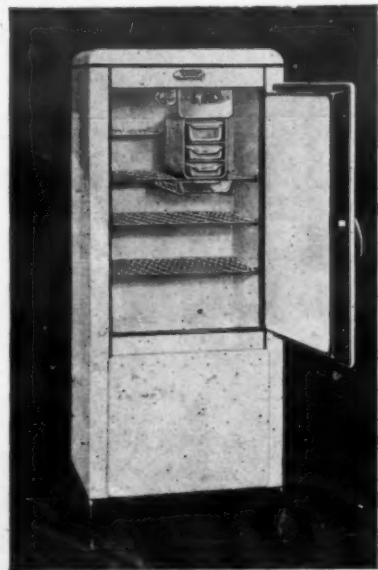
Warning is hereby given that this data is copyrighted and may not be reproduced as a whole, or in part, without express permission of ELECTRIC REFRIGERATION NEWS. We plan to publish another instalment in a later issue and to publish the complete revised data in the 1935 edition of the REFRIGERATION DIRECTORY.

Copeland
DEPENDABLE ELECTRIC REFRIGERATION

Exclusive

The advantage of a Copeland franchise for distribution rights is that it is a valuable piece of property, increasing in value daily.

Contracts are made on an exclusive territorial basis, reserving to the distributor the right to trade in Copeland products in definitely outlined areas and protecting the holder in his enjoyment of the financial benefit accruing therefrom.



7 Household Models, Porcelain & Porceloid
21 Commercial Models, 1/6 H.P. to 3 H.P.

Initially, Copeland distributors have the conviction, based on actual field experience, that both the Domestic and Commercial lines represent the ultimate in value, which decreases sales resistance—that each unit is dependable, economical, and thoroughly efficient—that Copeland engineering is sound—that the resources of the Corporation add value to their grant of territory and finally, that the interests of distributors are protected to the utmost.

These advantages are attracting to the Copeland family a splendid group of first-grade distributors, who are just as proud of Copeland as the Corporation is proud of their association with it.

To distributors who are seeking a profitable, pleasant connection with a line of products on which they can build an enduring business, we extend a cordial invitation to write for details of our exclusive proposition.

COPELAND REFRIGERATION CORP., Mount Clemens, Mich.
Division of Winslow-Baker-Meyering Corp.

Note: The abbreviation "ERN" means Electric Refrigeration News.

Absopure Refrigeration Corp.
Last known address:
1560 Theodore St., Detroit, Mich.
Incorporated April 15, 1927, (Michigan).
Officers (1929): David A. Brown, pres.; H. J. Redwood, v. p. & gen. mgr.; E. E. Von Rosen, secy.-treas. Directors: Brown, Redwood, J. H. Nugent, Thomas Moran, M. C. Burnside, E. E. Von Rosen, Harry J. Hayes, Israel Brown, Thomas Pendergast, H. V. Brown. Officers had been associated with David A. Brown, president of the company, since 1916.

In 1927 the corporation purchased all assets of Absopure Refrigerator Co. of Detroit and cabinet plant of Vogt Refrigerator Co., Louisville, Ky., formerly operated as divisions of General Necessities Corp., Michigan. David A. Brown, pres., manufactured complete line of household and commercial electric refrigeration machines in Detroit, and in Louisville made refrigerator cabinets, water coolers, and metal parts. Products sold through dealers in many parts of the United States and Canada. Also operated retail branches in Detroit, Chicago, and St. Louis. Used Alaska, Seeger, Vogt, and Reol cabinets.

The company went into receivership and was later absorbed by Universal Cooler Corp., according to Dec. 28, 1932 ERN. Detailed service instructions for Absopure commercial refrigerators were published in the July 18, July 25, and Aug. 1, 1934, issues of ERN, and on household refrigeration in the March 25, 1931 ERN. Replacement parts are available from Universal Cooler Corp., 7424 Melville Ave., Detroit, Mich.

Absopure machines were reciprocating, two-cylinder compressors being used for the larger commercial systems. Methyl chloride was the refrigerant. Both air-cooled and double-pipe water-cooled condensers were used, depending on the application.

Absopure figured prominently as the defendant in the electric refrigeration industry's most famous patent suit brought by Frigidaire on air-cooled condensers and other design features of household refrigerators. Absopure won the case, but the high litigation expense is said to be one of the principal reasons for the company's subsequent financial difficulties.

Complete testimony of the suit appeared in ERN March 27 and April 10, 1929, and was later published in a 48-page supplement (still available at \$1 per copy).

Acme Refrigeration Corp.
Last known address:
167 W. Front St., New York, N. Y.
Incorporated July 9, 1928 (New York).
All stock owned by Erie Mfg. Corp., Erie, Pa. Officers: A. A. Claus, pres., (Erie), W. L. Mack, vice pres., (Erie), B. M. Stoddard, secy. & gen. mgr. (New York), Walter A. Curtze, treas., (Erie).

The New York corporation was organized to act as sales agent in the metropolitan district for ice machines built by the Erie Mfg. Corp. The chief financial factor in both enterprises was Felix S. Curtze, who was also president of Erie Trust Co., Heister Locomotive Works, Erie Mfg. & Supply Co., and Keystone Fish Co., all of Erie. Mr. Stoddard (gen. mgr.) was president of Frigidaire before that company was sold to General Motors by William Durant.

The "Acme" was an ammonia absorption machine.

Moved from above address in June, 1929.

Adams Corp., Last known address:
74 Jewett Ave., Buffalo, N. Y.
Formerly Hall Products, Inc., Buffalo, N. Y.
Design: Two-cylinder reciprocating compressor using ethyl chloride. Belt drive. 1/4-hp. motor. Brine tank. Trade name: "Z-ro."

Airaplex Frigidarium Corp.
Last known address:
815 W. Lake St., Minneapolis, Minn.
According to records of Register of Deeds office, Oct. 14, 1925, the above filed articles of incorporation. Incorporators were: L. H. Englund, A. M. Gow, and Alice T. Englund, all of Minneapolis. Englund, before engaging in this business, was employed as salesman.

Machine used air as refrigerant, with gas or oil as source of energy. Trade name "Airaplex."

Shop moved from 4309 Aldrich Ave., S. to 815 West Lake St., Minneapolis, according to a report of Dec. 17, 1926. It was reported Dec. 21, 1927 that business had been discontinued.

Alaska Refrigerator Co.
Muskegon, Mich.

Established in 1891, this company operated as the Smith Refrigerator & Mfg. Co. at Michigan City, Ind., for many years before adopting the Alaska name. On Aug. 21, 1921, it was reincorporated (Michigan) as Alaska Refrigerator Co. at Muskegon, Mich.

In October, 1926, all common and preferred stock of the company was purchased by Coldak Corp. at a cost of \$1,700,000 (Oct. 30, 1926, ERN). These officers served while Alaska operated as a division of Coldak: A. P. de Saas, pres.; J. B. Bond, v. p. & director of sales; J. L. Gillard, v. p. & gen. mgr.; T. W. Moffatt, secy.; and A. M. Taylor, adv. mgr.

In 1930 stock of the Alaska Refrigerator Co. reverted back from Coldak, and another reorganization was consummated with these officers: J. L. Gillard, pres. & treas.; E. R. Gordon, v. p.; F. O. Emlow, secy.; Wm. C. Ruth, asst. secy.; and P. P. Reinhart, asst. treas.

Alaska was a large manufacturer of commercial and domestic ice refrigerators, and supplied many cabinets used by the early manufacturers of electric refrigerators.

In October of 1931, Norge Corp., one of its best customers for cabinets, purchased the Alaska plant in toto, and has since been operating it as the cabinet plant of Norge. The Alaska trade-name was not included in the transaction.

Alaskan—see Armstrong Machinery.

Allison—see Domestic Elec. Refr.

Alpinice—see Rauf Mfg. Co.

American Ace—see Summerheat Corp. of America.

American Beauty—see American Refrigerator Co.

American ElectriCE Corp.

475 Fifth Ave., New York City.

Factories: Belding, Mich.

Began manufacturing electric refrigerators after experimentation in 1925 or 1926 and by 1927 was in production. It owned the Belding-Hall Co., manufacturer of ice boxes, which had been in business for over 40 years at that time. Peak production of this company was 160,000 ice refrigerators a year. (Oct. 30, 1926, ERN). Officers (Feb. 2, 1927, ERN): Arthur E. Swanson, pres.; A. L. Cash, v. p. & gen. mgr.; B. F. Hall, v. p. & treas.; R. H. Hall, v. p. & sales mgr.; G. D. Weter, secy.; C. W. Coye, adv. mgr.; D. W. Hamilton, chg. engr. & prod. mgr.; S. D. J. Dunlop, sales prom. mgr.

Name of the company was changed to Belding-Hall ElectriCE Corp. about 1927. Manufactured household electric refrigerators under the name "ElectriCE." Compressor was rotary type, direct-driven, and SO₂ was used as refrigerant. Cooling unit was direct expansion type and control was thermostatic. Motor sizes were 1/4 and 1/2 hp. It was an air-cooled machine.

According to Oct. 12, 1927, ERN, Federal Judge Thacher appointed Brinton F. Hall as ancillary receiver of the properties of Belding-Hall ElectriCE Corp. The receiver was to continue business.

Aug. 3, 1928, assets were purchased at public sale by Charles J. Gibson, president of Gibson Refrigerator Co., for \$607,665, the company's charter being included in the sale.

Service instructions on this machine were published in Aug. 22 and 29 issues of ERN.

American Engine & Airplane Co.

Last known address: Los Angeles, Calif.

Entered the electric refrigeration business about February, 1927, with Ralph M. Burdick as president. It announced plans for manufacturing a small electric refrigerator and at the time it was proposed to change the name of the company to Refrigeration Corp. of America.

According to Aug. 31, 1927, ERN, the machine manufactured had a three-cylinder compressor with no rings, pins or eccentric straps. The thermostat had only one moving part and there were no syphons or diaphragms on the expansion valve. They also manufactured controls. Trade name of the unit was "Ice-Queen."

American Foundry Equipment Co., Mishawaka, Ind.

Organized in Ohio June 1, 1910 as the Sand Cutting Machine Co., Inc., the name being changed to the above April 29, 1920. Officers for 1934: Verne E. Minich, pres. and mgr.; Otto A. Pfaff, exec. vice pres. and treas.; Elmer A. Rich, vice pres.; Harold M. Miller, secy.

The company now manufactures sand-blasting machines and other foundry equipment, also electrical heating units.

Patents on its commercial refrigerating machines were sold to Summerheat Corp. of America, bankrupt in spring of 1934.

American Ice Machine Co.

Last known address:
212 N. Jackson Ave., Glendale, Calif.

Officers of this company given in ERN were: L. P. Zahn, pres.; L. E. Zahn, v. p.; E. W. Brown, secy.-treas.; Frank Chase, adv. mgr.

Manufactured household electric refrigeration systems and cabinets under trade names "Snow Bird" and "American." The American machine had a belt-driven reciprocating compressor, used "Argonum" or "Heliox" as refrigerants. Had both pressure and temperature controls, and used air and water for cooling. Motors ranged from 1/4 hp. to 10 hp. System was either dry or flooded, with either expansion valves or low-side float. (Dec. 18, 1929, ERN.)

American Refrigerating Co.,

Last known address:
816 S. Haskell Ave., Dallas, Tex.

Started about Jan. 1, 1930 to handle refrigerating machines and radios, under the name American Equipment Co. (not Inc.). On Jan. 1, 1931, the name was changed to the above. This company was a partnership, consisting of J. S. Booth, Mrs. Ave G. Booth, and C. F. Wald. The business was connected with Booth Lumber and Loan Co.

Manufactured and installed refrigerating coils, owning a patent on the coil used. ERN reported on Dec. 28, 1932 that the company had been absorbed by Summerheat Corp. of America, Dowagiac, Mich., reported bankrupt in spring of 1934.

American Refrigerator Co.

Last known address:
216 Harries Bldg., Dayton, Ohio.

Incorporated Feb. 5, 1932, (Ohio) by Albert J. Hodapp, Officers (1932): Hodapp, pres.; F. J. Garber, secy.-treas.

Hodapp had been with his father in real estate and contracting business under name, Gust Hodapp and Son.

Machine was designed by Carl F. Geiger of Dayton. Cabinets were to be manufactured by a Louisville, Ky. concern and shipped directly to dealers who would do the assembling. Trade name: "American Beauty" refrigerator.

Sales and dealer establishments for distribution were handled by a separate company organized by L. C. Warner, formerly regional sales manager of the radio division of the General Motors Corp. T. J. Gilbert who did promotional work in organizing the company was to receive a royalty on each refrigerator sold.

On July 23, 1932, Hodapp brought action of the company for appointment of a receiver. Nathan K. Brumbaugh was appointed receiver on that date and on

July 30, 1932, was authorized to sell assets of the corporation at private sale.

A. P. Anderson Co.

Pittsburgh, Pa.
Anderson, a refrigeration engineer invented a small household machine using ammonia as refrigerant. Distinctive feature was that it was all enclosed in one casting and entire machine, including motor, could be placed within the refrigerator (Sept. 12, 1928, ERN).

He has been connected with Excelsior Motor & Mfg. Co. (Excelsior commercial machine), was in charge of refrigeration for Indian Motorcycle, and assisted in the design of Clago Radio's household refrigerator. Anderson now lives at 1550 E. 66th Place, Chicago, Ill.

Angeles Refrigeration Co.

Los Angeles, Calif.

Arctic Aire—See Commerce Pattern & Machine.

Arctic Ice Corp.

854 McKnight Bldg., Minneapolis, Minn.

Arctic Ice Machine Co.

Last known address:
920 Market Ave., N., Canton, Ohio.

Incorporated July, 1927 (Delaware).
Officers (1934): Thomas Shipley, pres.; H. T. Fownall, v. p.; E. A. Kleinschmidt, secy.-treas.; Fred Burger, asst. secy.; E. T. Finckel, asst. treas. Directors: Officers, R. H. Claffelter, and V. K. Knesey. The officers are also officers of York Ice Machinery, York, Pa.

Arctic Ice Machine Co. together with a number of other companies was merged with York Ice Machinery Corp. which merger took over all assets and liabilities, although the Arctic Ice Machine Co. still retained its charter.

In May, 1932, the concern was reported to be no longer active.

Armstrong Machinery Co., Inc.

3201 E. Riverside Ave., Spokane, Wash.

Organized July, 1908, (Washington). The business was originally called Spokane Machinery Co. It was taken over by J. M. Armstrong, who managed the company until his death in 1909.

Officers reported in ERN Aug. 17, 1927, were: D. F. Kizer, pres.; L. B. Armstrong, vice pres.; Stanley Mayall, secy. and treas.; Harry Mayall, sales mgr. The officers in 1929 were: Mrs. Linda B. Armstrong, pres.; D. F. Kizer, vice pres.; Stanley Mayall, secy., treas. and mgr.

On March 28, 1930, the company made an assignment of assets to the Spokane Merchants Association for benefit of creditors. ERN reported Dec. 28, 1932, that this company had been absorbed by the General Machinery Co., 3500 E. Riverside St., Seattle, Wash.

Products manufactured (as listed in ERN Aug. 17, 1927): ammonia compressors and refrigeration equipment. Domestic, butcher, hotel, creamery, restaurant and packing plant equipment from 1/4 to 30 tons capacity. Belt-driven reciprocating compressors were used, with motors up to 50 hp.

Audiffren Co. of America

New York, N. Y.

One of the first household refrigerating machines of the compression type was the "Audiffren" invented by Abbe Audiffren of Grasse, France. This was a novel machine consisting of two revolving, oval-shaped chambers. Sulphur dioxide was the refrigerant.

In 1912 the H. W. Johns-Manville Co. started to introduce this machine in America, and manufactured it for a time in Fort Wayne, Ind. Later it was taken over by the Audiffren Co. of America.

Patents are now held by the Audiffren Refrigerating Machine Co., 9 Coddling St., Providence, R. I., which manufactures condensing units for commercial refrigeration and air conditioning.

Auto Electric Corp.

Last known address:
1522 N. 19th St., Milwaukee, Wis.

Manufactured the "Blizzard" compression system for household use. This was a machine of 500 lbs. refrigerating capacity operated under automatic control. Compressor was driven by 1/2-hp. motor. (Sept. 12, 1928, ERN.)

Autoelectric Icerator Corp.,

Last known address:
341 Adams St. (Previous, 16 Court St.), Brooklyn, N. Y.

Incorporated Jan. 3, 1928 (New York).
Officers: John T. Vannatta, pres. and treas.; Wm. M. Wallerstein, vice pres. and Ira E. Kaplan, secy.

In April, 1928, officers elected were: Abbey S. Götterer, pres.; Wm. M. Wallerstein, vice pres. and treas.

The "Icerator" machine was a 1/4-hp. reciprocating compressor, belt-driven, using methyl chloride. Thermostatic control. Furnished in a 6-cu. ft. household refrigeration cabinet.

Automatic Freezer Corp.,

1716 Ford Bldg., Detroit, Mich.

Factory at Hillsdale, Mich.
Incorporated May 31, 1928, (Mich.), succeeding Automatic Freezer Syndicate.
Officers: George A. Robertson, pres.; Frank R. Woods, vice pres.; A. J. Prentice, secy.-treas. Robertson succeeded Milton T. Watson as president. Prentice directed management of the company.

Automatic Freezer Syndicate, which this company succeeded, announced on Nov. 9, 1927 (ERN) that the Electro-Freezer Refrigerating machine had been developed and had been in use for five years.

Electro-Freezer was an air-cooled SO₂ machine using both pressure and temperature control, available in one or two cylinders. It had a Flintlock condenser, V-belt drive, flooded system, and used 1/4-hp. Century motors on domestic machines, and 1/2 and 3/4 hp. on commercial.

At one time, the company also made a household refrigerator known as the "Care Free." The company specialized in corrosion-proof electric refrigerator units

(Continued on Page 4, Column 1)

Crosley Dealers to Get \$3,000 Awards For Window Displays

CINCINNATI — Twenty thousand authorized Crosley dealers are competing for \$3,000 in cash and merchandise awards in a window display contest which is being sponsored by the Crosley Radio Corp.

The contest is a part of a general merchandising campaign for the purpose of stimulating retail sales of Crosley products during the months of August and September. Another feature of the campaign is the "Crosley Pictorial Plan."

A total of 67 prizes will be awarded in the window display contest. The grand prize is \$500 in cash while the runner-up will receive \$250. The next five best entries will receive one Crosley Eighty All-Wave radio set each, the next 10 winners will get 10 Crosley 72 American-Foreign lowboys, while the following 50 winners will each receive a Crosley Fiver Junior radio receiving set.

Displays will be judged on sales result during the period of the contest, effectiveness in telling the story, coordination with other advertising efforts, attractiveness, visibility, originality.

The "Crosley Pictorial Plan" is based upon a selected national prospect list made up of names of persons whose funds for monthly household expenditures have been recently materially increased.

These "live" prospects are first mailed a *Crosley Pictorial*, a newsy rotogravure publication of eight pages laid out in tabloid form.

One section is devoted to photographs of the Crosley 500,000-watt broadcasting station WLW and includes pictures of radio celebrities. Pictures of actual home installations of electric refrigerators, of the new Crosley "Koolrest" air conditioner, and of various models of the 1935 radio receiving set line form a part of this pictorial newspaper.

Names of prospects receiving the *Crosley Pictorial* are provided the dealer and follow-up literature and personal calls by salesmen complete the approach.

Carload of 'Liftop' Models Is Sold In 3 Days

BEAUMONT, Texas—A carload supply of G-E "Liftop" refrigerators was sold three days after delivery by the Gulf States Utilities Co. here, according to Kenneth E. Sutton of the utility.

Sales meetings were held at division and district headquarters prior to announcement of the new machine. Parker Allen, superintendent of merchandise sales, presided at the Beaumont meeting. Dick Reeves, superintendent of merchandise sales, Louisiana division, at the Lake Charles meeting and E. L. Robinson, superintendent of merchandise sales, Navasota division, at Navasota and Huntsville.

W. D. McKelvey, G-E central stations contact man, assisted by J. A. Damon of Edmundson Refrigerating Corp., G-E distributor, presented the sound-slide "Liftop" film. P. E. McChesney, vice president of Gulf States Utilities, announced prices and terms.

Full-page newspaper advertisements in color announced the new refrigerator, and were followed by four-column by 18-inch insertions. Handbills were distributed in the towns not covered by daily newspapers.

The Gulf States Co. also is merchandising through Beaumont dealers who sell competitive machines. This is an arrangement which will last only until other manufacturers make small models available.

Majestic Receiver Seeks To Settle C.I.T. Claim

CHICAGO — Hearing was held Tuesday, Aug. 27, in the United States District Court here before Edmund D. Adcock, referee in bankruptcy for Grigsby-Grunow Co., to consider a petition from Frank M. McKey, trustee for the bankrupt company, asking for authorization to compromise the controversy between the trustee and C.I.T. Corp. as follows:

"1. The C.I.T. Corp. to waive any and all rights which it can or may have to prove and have allowed any claim against this estate or the receiver and trustee in bankruptcy of this estate.

"2. The trustee to waive any rights which he can or may have or which this estate may have in and to certain collateral instalment paper of the face amount of \$31,382.53 held by C.I.T. Corp., the proceeds of any collections thereon or the proceeds of said paper which may have been purchased by said C.I.T. Corp., and in and to the 10 per cent reserve fund held by C.I.T. Corp."

NORGE CORPORATION
DETROIT, MICHIGAN

Mr. Norge Dealer:
What do you think of
the Norge proposition?

That was the gist of a letter recently sent out to a miscellaneous list of Norge dealers. Following are a few of the replies. Names will be given on request.

FROM PENNSYLVANIA... "The simplicity of the Norge requires little or no service... profit margin thus retained and not paid out for service."

FROM VIRGINIA... "Have sold 150 Norges in a little town of 3,100 people... Never repossessed a Norge yet... Each Norge owner a booster... We attribute our excellent record to two things: The wonderful local and national advertising campaigns, and our 100% Norge owner-booster... We attribute our handsome profit from the sale of Norges to the fact that our service cost has been practically nothing."

FROM MISSISSIPPI... "We have made money selling Norges while several other dealers in town have quit... When we move a Norge it is sold and stays sold... Now that the territory is pretty well sold on Norges it gets easier all the time to sell them. The... boys have been forced out on account of the heavy replacement costs after the guarantee runs out. Our experience selling other kinds before we sold Norge convinces us that Norge is the best money maker for us."

FROM TEXAS... "Norge has been the outstanding major item in our line from the standpoint of Profit, Customer Satisfaction, and all around good will builder... Norge proves its worth in giving the customers more than they expected and

the dealers have been able to keep the profits on account of the little servicing."

FROM MASSACHUSETTS... "Norge line has enough different features to make it easy for a dealer to really sell and to have something to talk about. The attractive net costs to the dealer insure a wider-than-the-average margin of profit, and, because Norge requires practically no service, an unusually high percentage of this margin is retained by the dealer."

FROM ILLINOIS... "The buying public, as a whole, will not purchase refrigerators without making comparison with the Norge, and with this comparison, proper demonstration on the part of the Norge dealer or salesman is all that is necessary to throw the large majority of sales into the lap of Norge."

FROM MINNESOTA... "This year, despite a truck drivers' strike in May, we sold more Norges up to July 1st than we sold in all of 1933... This was due to no special effort on our part. Norge advertising, national and

local, coupled with 100% owner satisfaction, is to be credited for this gratifying increase in sales... This is real profit, not eaten up by service or re-possession. Service required is practically nil, and Norge sales stick."

FROM MISSOURI... "Some of the Norge sales we made seven years ago have required no attention aside from oiling motor twice a year, with the possible exception of a new belt. That's what makes it profitable to sell Norge. Every user a booster."

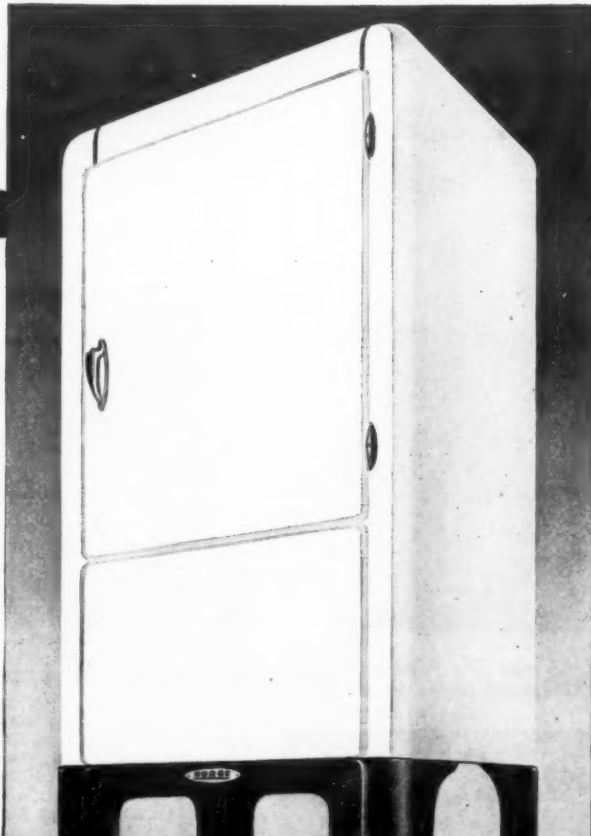
FROM MICHIGAN... "During the first six months of this year our sales are 271% greater than our entire sales of last year... Most fellows feel that when the first of July rolls around that the refrigerator season is over, but we feel that refrigerators can be sold during the winter months. In fact, we have sold and delivered today four Norge refrigerators, and we still have many good prospects."

A hardware dealer in Iowa had been handling a line of refrigerators which he said kept him busy servicing. He decided to drop the line and take on another. Refusing to listen to manufacturers' representatives, he went out to neighboring towns and interviewed refrigerator dealers. After hearing the experience of a large number of dealers, he was convinced that Norge was the nearest service-proof of any. He is now a Norge dealer.

NORGE

Rollator refrigeration

THE ROLLATOR... Smooth, easy rolling power instead of the hurried back-and-forth action of the ordinary refrigerator mechanism. Result—more cooling power for the current used and a mechanism that actually improves with use. Only Norge has the Rollator.



• Letters like these are indisputable proof of the profit advantage of handling the Norge line. Write for complete and specific details of the Norge proposition.

NORGE CORPORATION
Division of Borg-Warner Corporation, 606-670
East Woodbridge Street, Detroit, Michigan

Norge Rollator Refrigeration • Norge Electric Washers • Broilator Stoves • Aerolator Air Conditioners • Whirlator Oil Burners

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CORPORATE HISTORY OF REFRIGERATION INDUSTRY

(Continued from Page 2, Column 5)

for ice cream cabinets and soda fountains. Automatic Freezer Corp. was dissolved in 1930, assets being purchased by Marinette Showcase Co., Marinette, Wis.

Automatic Refrigerating Co.

Present address: 618 Capitol Ave., Hartford, Conn. According to Sept. 12, 1928 ERN, in the latter part of 1902, Fred Kimball at that time manager of fractional horse power motor division of the General Electric Co. proposed combination of four manufacturers of refrigerating systems—Singer Co., Marshall Co., Dunham Co., and Bantline-Cleveland Co. As a result, Federal Automatic Refrigerating Co. was incorporated 1903 (New Jersey).

Manufactured complete automatic refrigerating machines from 1/2 ton to 20 tons capacity. The designing engineers being Charles Westerberg, one of the principal owners of the Singer Co., and E. T. Williams. About 70 patents were pooled in joining the four companies.

Federal Automatic Refrigerating Co. went through a period of changes culminating with the now well-known Automatic Refrigerating Co. of Hartford. This company is regarded as one of the pioneers in automatically controlled refrigeration.

The Automatic Refrigerating Co. later discontinued building its own machines. Patents on a unit using air as a refrigerant were acquired by Devon Mfg. Co. of Brighton, Mass. Formerly made the "Odin" household refrigerator.

At present, the company acts as installers of large commercial refrigerating plants, most of the equipment being manufactured by other companies. Universal Cooler machines are mainly used in commercial installations. Manufacture of household electric refrigerators was discontinued in 1925.

Officers (1934): H. B. Carey, pres. & treas.; H. Bulkely, v. p.; Michael F. Owens, secy. & mgr. Directors: Officers, Milton J. Warner, and A. D. Barney.

Automatic Refrigerator Corp.

Last known address: 221 N. La Salle St., Chicago, Ill. Incorporated January, 1930 (Delaware). Started business in Illinois about Aug. 15, 1930.

Officers and directors (1931): J. K. Butler, pres.; E. J. Decous, v. p.; R. J. Sherman, secy.-treas. Directors were the officers.

Butler was formerly in the radio business in Cincinnati, and president of the Automatic Radio Corp. Decous was formerly associated with this same company. Officers of this company were among the first to attempt selling of household refrigerators on the coin meter plan which became wide-spread as a merchandising method for department stores in 1932 and 1933.

The plan was for the company to operate through distributors who were to purchase refrigerators for a specified amount of capital stock, the refrigerators being installed in homes on a rental basis operated on a coin-meter system.

The company held various patents on coin-operated machines. Its refrigerators were manufactured by other concerns. In 1932 Refrigeration Directory, company was listed as a manufacturer of coin-operated household electric refrigeration systems and coin meters. Officers were: J. K. Butler, pres.; E. J. Decous, v. p.; R. J. Sherman, secy. & gen. mgr.; J. C. Hoff, sales mgr.; J. M. Curless, chief engr.

In 1932 the business was taken over by the International Register Co., manufacturers of coin meters, 15 South Throop St., Chicago, Ill.

Bachman Refrigerator Co.

Pittsburgh, Pa. Small compression machine invented by C. E. Bachman of Pittsburgh. Made in small units of about 250 lbs. capacity. This sold for \$250 at the factory. (Sept. 12, 1928, ERN.)

Baldwin Refrigerator Co.

Pine St., Burlington, Vt. Incorporated 1899 (Vermont).

Officers (1933): E. E. Smith, pres. & gen. mgr.; H. T. Rutter, v. p. & treas. Directors: E. E. Smith, H. T. Rutter, E. Fuller, L. J. Moon, L. E. Moon, C. L. Woodbury, and J. H. Jackson. Smith managed the company for years; Rutter was vice president of Howard National Bank & Trust Co. of Burlington; Woodbury was president and general manager of Mead Mfg. Co., manufacturer of sport wear. Jackson was mayor of Burlington and an inactive dentist.

In 1925 the firm located in modern building on Pine St., but their sales fell off noticeably. They first intended to manufacture electric refrigerators but in spring of 1930, directors decided to liquidate.

Balsa Refrigeration Corp.

Last known address: 152nd St. & Exterior St., New York City. Reported to have operated at above address and said to have moved to Newark, N. J., about June, 1924.

Barnsmith Refrigerator Co.

Chicago, Ill. Compression system machine for household use invented by H. J. Smith. Refrigerant which was prepared by Dr. C. H. Barr, was said to be a combination of three ingredients. Machines were to be manufactured and marketed in 1917. Trade name was "Barnsmith." (Sept. 12, 1928, ERN.)

Bauer Bros. Co.

Sheridan Ave., at Burton, Springfield, Ohio. Original company was started Sept. 3, 1882, as the Foss Mfg. Co. but stock control passed to Bauer Bros. and the corporate name was changed to the above Jan. 1, 1911.

Officers (1934): Charles L. Bauer, pres. and gen. mgr.; W. A. Bauer, vice pres.; P. J. Shouvin, treas., and W. E. Copenhaver, secy. Directors: Officers, with George Cugley and W. G. Horr.

Manufacturers of oil mill, pulp extracting and speed mill machinery and other industrial equipment.

Started in refrigeration business in spring of 1932, but discontinued production before attaining appreciable volume. Distribution was mainly through mercantile establishments. Parts may be obtained from Bauer Bros. Co. or its agents.

The 1932 Refrigeration Directory contains specifications for a line of three household electric refrigerators.

Compressors were made by Brunner, controls by Automatic Reclosing Circuit Breaker Co. (Ranco), and cabinet by Bauer. Methyl chloride was the refrigerant.

Belding-Hall—See American Electric.

Belleville Refrigeration Co.

Last known address: 21 Florida St., Belleville, Ill. Organized April 22, 1932 (Illinois).

The business was originally started as the Frankenburg Refrigeration Co. in 1928, the name later being changed to Modern Refrigeration Co. In May, 1932, Modern Refrigeration Co. was taken over by the North Pole Corp. and reorganized. When it was discovered that the name "North Pole" was copyrighted the name was changed to Belleville Refrigeration Co.

Officers (1932): Julius F. Seib, pres.; Eugenia Hallbauer, treas.; Paul Wagner, secy. Directors: Officers, Frieda Seib, and R. N. Cooper.

Operated as sales division of Modern Die & Plate Press Mfg. Co. Engaged in manufacture and sale of electric refrigerators, cabinets, fixtures, household utilities, and allied articles. Volume of business small.

The Belleville machine was a conventional unit with reciprocating compressor, Ranco temperature control, low-side float, and used SO₂. Six models were made, three with 1/2-hp. motors and three with 1/4-hp. motors. Company built its own cabinets. Specifications were given in the 1932 Refrigeration Directory.

Julius Seib states company went out of business in June, 1933.

Benedict & Co., Ltd.

1525 W. 7th St., Los Angeles, Calif. Incorporated March 7, 1930 (California), and on April 21, 1930 succeeded Barry Benedict individually. Control of company purchased by Starr Co., Richmond, Ind. in Oct., 1930. Barry Benedict was only one remaining of original incorporators.

Officers (1931): Ray Strahan, pres.; Barry Benedict, v. p.; Harry L. Nolder, secy.-treas. Directors: officers and Fred Gennett, chairman of board. He is a son of Harry Gennett, pres. of the Starr Co.

Officers were moved in Jan., 1931 from 2869 West Pico St., Los Angeles, to 1527 West 7th St.

On Aug. 31, 1933, it was reported that the concern had been inactive for some time, with the exception of collecting accounts receivable.

Manufactured and sold an electric refrigerator under the trade name Yukon. Manufacture was done on an assembly basis, units and cabinets being manufactured by outside concerns. Compressors used were manufactured by Bedell Engineering Co. Seeger cabinets were used.

Berg Mfg. Co.

Gardner, Mass. Incorporated June, 1926 (Massachusetts), taking over the business of E. G. Berg Mfg. Co. (not inc.) which had been established in 1922.

Officers: J. H. Drury, pres.; W. L. Beaman, treas.; Carl H. Hedstrom, clerk. Corporate name changed to Iceberg Mfg. Co. in 1928.

Made methyl chloride refrigerators under the name "Iceberg." Had a belt-driven, reciprocating compressor, temperature control, and air-cooled radiator-type condenser. Used 1/2 to 1-hp. motors.

The Iceberg Mfg. Co. was petitioned into bankruptcy Dec. 21, 1931, and the business closed out and assets disposed of. A new corporation was formed as Iceberg Corp. said to be doing no manufacturing but disposing of stock on hand.

For service instructions on Iceberg machines see Aug. 8, 1934, ERN.

Berry Automatic Ice Machine Co.

Last address: 7344 Kercheval Ave., Detroit, Mich. Henry Berry, now of 2488 Sheridan Ave., Detroit, was formerly connected with the Berry Automatic Ice Machine Co., which was later known as the Universal Ice Machine Co. Both of these concerns are now out of business.

For a number of years Berry has done experimental work in perfecting an ice making machine for household refrigerators, but has not been active in business for several years.

Bluebird Refrigerator Co.

Last known address: Long Beach, Calif.

Bodine Ice Machine Co.

Last known address: 319 Boonville Ave., Springfield, Mass. Commercial and industrial refrigerating machines.

Bohn Refrigerator Co.

Present address: 1350 University Ave., St. Paul, Minn.

Established about 1896 as manufacturer of ice boxes, later manufacturing cabinets for electric refrigeration. Became one of the biggest cabinet manufacturers in the business, making all-porcelain cabinets for General Electric and Westinghouse.

Brought out a complete household electric refrigerator during 1931, using a machine manufactured by Sunbeam Electrical Mfg. Co., Evansville, Ind.

The machine had a direct-connected, rotary compressor using SO₂ as refrigerant and had an expansion valve. Several models of from 4 to 16 cu. ft. capacity were included in the line. Motors were 1/2 and 3/4 hp.

Late in 1932 the company decided to leave the electric refrigeration business and return to the ice refrigerator field exclusively. The stock of complete electric refrigerators was liquidated during 1933.

Officers for 1934 according to the 1934 Refrigeration Directory were: G. C. Bohn, pres.; H. H. Bohn, v. p.; R. H. Ames, secy.-treas.; R. D. McCord, sales mgr.; L. L. Murray, adv. mgr.; F. Frogh, works mgr.; and T. W. Albertson, refrig. engr.

In 1934 the company was reported to be operating under a trustee who was attempting to dispose of the estate as a going unit.

Bortz & Kepler

533 Lorain St., Sharon, Pa.

Manufactured household size electric refrigeration machines and compressors, according to the 1932 Refrigeration Directory.

Officers (1932): D. S. Kepler, gen. mgr., and O. L. Bortz, chief engr. In January, 1933, the business was absorbed by Triangle Pump & Mfg. Co., Sharon, Pa. This latter company was financed by W. B. Caldwell until April, 1934, when he sold his interest. Triangle Pump & Mfg. Co. was said to be still in existence but inactive in August, 1934.

Bosse Refrigerator Co.

New York, N. Y. This was a small ammonia absorption apparatus for household purposes.

Boyle Ice Machine Co.

521 W. Monroe St., Chicago, Ill.

Incorporated 1878 (Illinois) by David Boyle, the operators of this company are said to have done as much as anyone to develop the compression ammonia machine (ERN, Dec. 12, 1928). Records show that in 1869 Mr. Boyle built two small experimental ice machines—both of which were failures. In 1872 he took out his first patents, and in the following years erected a good many successful ice-making plants.

In 1884 Mr. Boyle withdrew from the Boyle Ice Machine Co., and remaining interests were consolidated with Empire Ice Machine Co., St. Louis, to form the Consolidated Ice Machine Co. which went out of business in 1890.

Brooks Refrigerator Co.

Buffalo, N. Y. Designed by engineers of Brooks steam-operated automobile.

Browning-Drake Electric Refrigeration Co.

West Townsend, Mass. Incorporated Feb. 18, 1931, (Massachusetts). Officers as of March 22, 1933 were: Wm. Neilson, pres.; Wm. Miller, treas.; I. B. Yont, gen. mgr. The original president was Thomas R. Whitney of Waltham, Mass., who was succeeded by Neilson. Yont was treasurer and president in a liquidating firm of Browning-Drake Corp., located at the same address.

Browning-Drake Electric Refrigeration Co. sold electric refrigerators manufactured by the Browning-Drake Corp. which also manufactured ranges, oil burners, and radio sets. The refrigeration operation was quite limited.

Franklin G. Hammond, Jr. was appointed receiver in equity for the Browning-Drake Corp. on July 15, 1932.

Brunswick-Kroeschell Co.

Jersey Ave., New Brunswick, N. J. Incorporated June 1, 1922, (New Jersey). The business was originally established May 15, 1900 when the Brunswick Refrigerating Co. filed articles of incorporation. It was consolidated with the Union Refrigerating Co. of New Brunswick, New Jersey, Jan. 3, 1903, with the Brunswick Refrigerating Co. continuing business until formation of the Brunswick-Kroeschell Co.

A pioneer manufacturer of commercial refrigerating machines, selling them throughout the entire world, and forerunner of the present commercial refrigeration dept. of Carrier Engineering Corp.

Ammonia, carbon dioxide and methyl chloride are the principal refrigerants used. Compressors are reciprocal, ranging in capacity from 1/2 ton upwards. Their chief feature of design is the use of an eccentric rather than a crank-shaft. The company also manufactured low-side equipment including milk coolers, ice-making systems, ice cream systems.

Executives given in ERN Feb. 2, 1927: James W. Johnston, pres.; Sidney B. Carpenter, v. p. and gen. mgr.; Arnold H. Goetz, v. p., and chief engr.; Robert A. Kroeschell, secy.; Wm. Carpenter, treas.; Harry Harrison, adv. mgr.; Walter Jones, prod. mgr.

A report of May 16, 1933 gives the same officers except that Harrison is omitted as adv. mgr. and E. S. Schenck is added as asst. treas. Directors were given as J. W. Johnston, Sydney B. Carpenter, Robert Kroeschell, E. S. Schenck, Rose Harrison, Walter Jones, Arnold H. Goetz. Brunswick-Kroeschell Co. took over the plant of Kroeschell Bros. at 440 W. Erie St., Chicago, Ill., and continued to operate that plant as a branch.

Jan. 1, 1931, the Brunswick-Kroeschell

Co. became a subsidiary of the Carrier Engineering Corp. of Newark, N. J.

It is now operated as a branch of Carrier Engineering Corp. with E. Lowe in charge as manager.

Bryant Electric Refrigerator Corp.

Last known address: New Milford, Pa.

Incorporated Sept. 2, 1927, (Delaware). Operations started August, 1928. Officers, (1930): F. L. Bryant, pres.; C. H. Ainey, v. p.; D. C. Vail, secy.; R. B. Eaton, treas. Directors: Officers, E. P. Little, A. E. Merrill, and W. J. Day.

Refrigerating machine was the invention of F. L. Bryant who had been employed by various electric refrigerator manufacturers. Ainey was a retired banker and Eaton a hardware merchant.

Manufactured household and commercial SO₂ refrigerating machines. Compressors were of the reciprocating type. The line included four household models using 1/4-hp. Century motors, Rex cabinets, temperature control. (Dec. 18, 1929, ERN.)

As of Oct. 23, 1930, Bryant was also reported to be connected with Bryant Refrigerator Equipment Corp., a new organization at Sanitar Springs, N. Y., with offices at 62 Bennett Ave., Binghamton, N. Y.

On Jan. 8, 1932 an involuntary petition in bankruptcy was filed.

Bryant Pattern & Mfg. Co.

704 St. Antoine St., Detroit, Mich.

Chartered on Sept. 23, 1912, as the E. S. Bryant Pattern Works but through amendment of charter Dec. 15, 1924, the above name was adopted.

Original president was Alvah L. Sawyer, with A. W. Bryant, v. p., and E. S. Bryant, secy.-treas. Officers (1932): E. S. Bryant, pres.; S. R. Dubrie, v. p.; A. W. Bryant, secy.-treas.

The company specialized in manufacture of patterns, also doing general line of machine work for the manufacture of tools, dies, etc.

According to May 26, 1927, issue of ERN, company manufactured cabinets for commercial electric refrigerators, ice cream cabinets, and soda fountains. They also made refrigeration compressors (air and water-cooled types), ice machine patterns and dies. In July 20, 1927, issue of ERN, they were mentioned as making commercial machines of from 300 to 400 lbs. capacity.

Firm was unsuccessful and was sold out under chattel mortgage June 10, 1933. Bulk of assets were acquired by Diamond Pattern & Mfg. Co.

Cadillac—see Central Machine Co.

Cadillac Tool Products Co.

Last known address: 227 Iron St., corner of Wight St., Detroit, Mich.

Chartered June 4, 1929, (Michigan). Originally located at 201 Fitzpatrick St., Detroit, but moved to 150 Grand Ave., Mt. Clemens, Mich. Nov. 1, 1930. Early in Jan., 1933, again moved to Detroit to above address.

Corporation succeeded Cadillac Tool Co. of which A. J. Glass was a partner, business being established in Mt. Clemens in 1925. At first D. N. Laurents and C. E. Inman were officers of company, but were through in 1931.

Officers and directors (Feb. 20, 1933): A. J. Glass, pres. & treas.; Wm. F. Glass, v. p.; N. Glass, secy. W. F. Glass started in the business in 1928 and before that was connected with auto trailer concern in Detroit. Norman Glass had formerly been employed as a tool maker by Packard Motor Car Co.

Manufactured tools, dies, and jigs, doing work for the automobile industry including the Ford Motor Co. Formerly did considerable work for Copeland Products Co., Mt. Clemens, Mich.

On Oct. 14, 1933, it was reported that chattel mortgage held by the Citizens Savings Bank of Mt. Clemens, Mich., had been foreclosed, and assets would be sold at public auction. Unsecured assets were sold Oct. 16, 1933.

Callectro-Frost—see California Electric.

California Electric Refrigerators, Inc.

Last known address:

Fifth & Dwight Way, Berkeley, Calif.

Incorporated July 20, 1923 (California). Incorporators: J. A. Hart, C. F. E. Burmeister, O. Burneister, B. H. Burmeister, C. Muller, J. V. Jervis, C. F. Olson.

Founded to take over the electric refrigerator business established by John A. Hart and O. S. Burmeister about January, 1927, at Jerrold and Napoleon Sts., San Francisco.

Officers (Feb. 20, 1929): O. S. Burmeister, pres. & treas.; Otto Burmeister, Jr., v. p.; S. R. Burmeister, secy. Directors: Officers, B. C. Sequeria, W. A. Cook, and J. V. Jervis.

O. S. Burmeister was also president of Franklin Building & Loan Society. He began business January, 1906, in partnership with H. C. Bailey, this being dissolved in June, 1910. He next formed a partnership with J. A. Hart, in a planing mill business in 1913 continuing this business until June, 1928. Sequeria, a director, was formerly identified with Frigidaire Corp. Jervis was engineer of the California Union Commercial Bldg. in San Francisco.

According to a report of Feb. 20, 1929, the company was manufacturing small refrigerators units. Trade name was "Callectro Frost."

Machine had reciprocating compressor, V-belt drive, pressure control, used SO₂ flooded system with low-side float. Air cooled. Used 1/2 to 1 1/2-hp. Century motors.

On May 7, 1930, it was reported that the company had dismantled its plant with the understanding that some of the machinery was sold and other machines moved to San Francisco to an address not known. On July 14, 1930, they filed a voluntary petition of bankruptcy.

California Pride—see Luitweiler Cam Pump Co.

Calvert—see Earnshaw Mfg. Corp.

Canton Refrigerators, Inc.

250 W. 49th St., New York City.

No records of incorporation available for this company.

On April 9, 1931, Allen Canton stated that a concern of the above name was in process of organization, and that the new corporation would continue the business formerly operated by International Refrigerator Corp. and the business formerly

(Continued on Page 6, Column 1)

Cabinet Builders Choose

CELOTEX

to assure
efficient performance
for temperature control
— sound quieting

STERILIZED • WATERPROOFED • SANITARY

Celotex is so widely used in refrigerators and bottle coolers because it provides the essential qualities necessary to good cabinet construction.

Celotex refrigerator insulation is specially manufactured to meet high standards of insulating efficiency. It possesses sound-absorbing characteristics of particular value in meeting noise quieting problems.

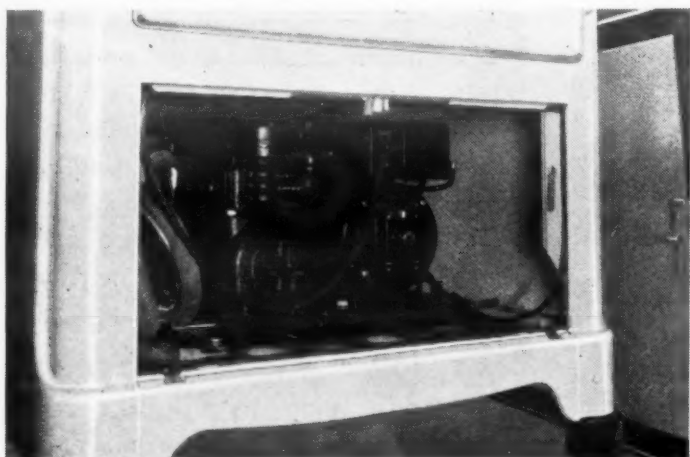
In addition, Celotex is a thoroughly sanitary product. It is sterilized, waterproofed, odorless. Designers favor it because it possesses inherent strength

combined with light weight. Manufacturers approve it because it is furnished ready fabricated for any type, size and form of cabinet.

And here is another important, exclusive advantage: All Celotex Cane Fibre Products are manufactured under the Ferox Process (patented) and therefore effectively resist damage by Fungus Growth, Dry Rot and Termites (White Ants).

Our experience in the refrigeration field is both practical and extensive. We invite inquiries and consultation. Address:

THE CELOTEX COMPANY, 919 NO. MICHIGAN AVE., CHICAGO, ILL.



To subdue the sound of the motor the designers of this electric refrigerator used Celotex to line the two side walls and the front of the motor compartment.

CELOTEX
BRAND
INSULATING CANE BOARD
Reg. U. S. Pat. Off.

Electric Refrigeration Code Is Explained for Dealers

DETROIT—An explanation of certain provisions of the NRA Code of Fair Competition for the Electric Refrigeration Industry has just been issued by the supervisory agency of the Refrigeration Subdivision of the Electrical Manufacturing Industry.

This explanation has been prepared in pamphlet form for distribution among electric refrigerator distributors and dealers, in order that they may be familiar with the regulations under which their manufacturers are operating. Any dealer or distributor who wishes a copy of this pamphlet should address his request to his manufacturer.

Manufacturers are governed by (1) the Basic Code for the Electrical Manufacturing Industry and (2) the Supplementary Code for the Refrigeration Subdivision thereof. The Basic Code covers such subjects as labor provisions, statistics and uniform cost accounting which are applicable to the entire electrical manufacturing industry, while the Supplementary Code contains detailed trade practice provisions which apply only to the marketing of electric refrigerators.

All reference to labor provisions, statistics and cost accounting has been omitted from this pamphlet, as being of no interest to distributors and dealers.

Amendments have been proposed to the Basic Code for the Electrical Manufacturing Industry which have not yet been approved. When approved, it may be necessary to modify certain of the statements contained herein.

(A) Participation

1. Who is subject to the Code for the Electrical Manufacturing Industry?

Everyone promoting, or actively engaged in the manufacture for sale of electrical apparatus, appliances, material or supplies and such other electrical or allied products as are natural affiliates.

2. Does this include manufacturers of gas-operated refrigerators?

No. They come under the Gas Appliance Code.

3. Who is subject to the supplementary Code for the Refrigeration Subdivision of the Electrical Manufacturing Industry?

Everyone engaged in the manufacture for sale of electrical household refrigerators and such commercial electrical refrigeration as is not within the control of other duly approved codes.

4. What commercial refrigeration is within the control of other codes?

The Code for the Commercial Refrigerator Industry covers insulated rooms, cabinets, etc., for the storage of perishables in commercial establishments, but does not apply to the mechanical unit.

5. Does any other code affect commercial refrigeration?

Large commercial and industrial refrigerating machinery will be covered by a Supplementary Code for the Refrigerating Machinery Industry, under the Basic Code for the Machinery and Allied Products Industry.

6. What is the dividing line between large commercial units made by manufacturers of household refrigeration and small units made by the manufacturers of refrigerating machinery?

The exact dividing line has not yet been established but the subject is being studied by a joint committee of the two industries.

7. Is a company which merchandises an electric refrigerator made by another company subject to the code?

Yes, if (a) the merchandising company owns the manufacturing company 100 per cent or (b) is the exclusive sales outlet for a refrigerator produced by the manufacturing company exclusively for the former. In either case, the merchandising company is considered to be "promoting the manufacture for sale" of electric refrigerators.

8. Are non-factory owned electric refrigerator distributors and dealers subject to the code?

No. Their operations are covered by the Wholesale and/or Retail Codes.

9. Is a factory-owned wholesale distributing branch or retail store subject to the code?

Yes, if it (a) is operated in the manufacturer's own name or (b) is a subsidiary which sells only the manufacturer's own products. On the other hand, if an owned or subsidiary sales company sells other products in addition to the manufacturer's own products, it will come under the Wholesale and/or Retail Codes.

(B) Selling Prices

1. Are manufacturers' prices filed with the code authority?

No. Prices may be filed after determination by the Supervisory Agency (see below) and notice to manufacturers. Such determination and notice has not been made by the Supervisory Agency.

2. Is there any limitation on prices?

Yes. The Code provides that manufacturers must not sell below cost, except in certain circumstances mentioned below.

3. Who determines whether a manufacturer is selling below cost?

If formal complaint is made, the matter of investigating costs is entirely in the hands of the Supervisory Agency.

4. Under what circumstances may sales be made below cost?

"Dropped lines, second, or inventories which must be converted into cash to meet emergency needs" may be sold on such terms and conditions as the Supervisory Agency may approve.

5. May the Supervisory Agency take the manufacturer's word that the product he wishes to sell below cost actually comes within the above provision?

No. The Supervisory Agency must investigate as seems necessary to establish the actual facts.

6. Has the Supervisory Agency approved any such sales?

In only seven cases up to this time. Except in one case of a bankrupt where inventories had to be converted into cash to meet emergency needs,

only small quantities of obsoleted models were involved.

7. How are repossessed and second-hand products to be governed?

Repossessed and second-hand products may be sold at any price above cost, unless prices for the products of the Subdivision are required to be filed.

8. Are trustees in bankruptcy subject to the regulation against selling below cost?

Yes, if they carry on manufacturing operations. No, if they are merely selling stock on hand.

(C) Supervisory Agency

1. Who comprise the Supervisory Agency for the Refrigeration Subdivision?

Messrs. G. M. Johnston, Chairman (Universal Cooler Corp.)

W. F. Armstrong (Frigidaire Corp.)

H. E. Blood (Norge Corp.)

Thos. Evans (Merchant & Evans Co.)

G. W. Mason (Kelvinator Corp.)

2. What are the duties of the Supervisory Agency?

The Supervisory Agency has four responsibilities under the Code as follows:

(a) The Supervisory Agency may approve variations in method of costing.

(b) It may authorize selling below cost.

(c) It may determine that manufacturers' prices shall be filed with the Code Authority.

(d) It shall investigate facts in regard to all complaints of violation of the Code, causing to be made such examination or audit as may be deemed necessary.

3. What is the relation of the Supervisory Agency to the Code Authority?

The Supervisory Agency reports to and works under the supervision of the Code Advisory Committee of the Code Authority.

4. May the Supervisory Agency make explanations of the code?

Yes, but important matters of explanation are first submitted to the Code Advisory Committee and to Counsel for approval.

(D) Fair Trade Practices

(a) General

1. What are the provisions regarding misbranding?

It is prohibited to mark or brand any electric refrigerator in any manner which has the tendency to mislead or deceive as to size, quality, etc.

2. How has this been interpreted?

It has been ruled that it is a violation of this provision to use a model number to indicate a size greater than

the actual net cubic foot capacity, Nema rating; for example, to designate as Model 7, or the like, a box which actually has only 6.5 or 6.9 cubic feet net capacity. Where model numbers are used to indicate size, another digit should be added to represent tenths of a cubic foot.

3. What about breach of contract? Manufacturers are prohibited from inducing breach of consumers' contracts.

4. May manufacturers hire employees of their competitors?

Yes, but they may not entice them away for the purpose of unduly hampering, injuring or embarrassing the competitor.

5. Does the code prohibit disparagement of competitors?

Yes, it prohibits willful or malicious defamation of competitors and the disparagement of competitors' products.

6. What about secret rebates, advertising allowances, etc?

Secret rebates or discounts, free special services or exorbitant advertising allowances are prohibited.

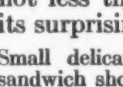
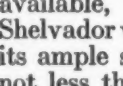
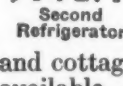
7. How is the subject of commercial bribery covered?

Manufacturers are not allowed to "give, permit to be given, or directly offer to give" anything of value "for the purpose of influencing or rewarding" (Concluded on Page 7, Column 1)

Amazing Popular Approval Greet the New



THE enthusiastic reception accorded the new Crosley Chest Shelvador proves that Crosley has again struck the keynote of what people want. Housewives—homeowners—everywhere see instantly that here is value beyond anything ever offered in electric refrigeration; they see the convenience, where space is limited, of a complete Shelvador electric refrigerator that is only 36" high, 23½" wide, 20½" deep; they appreciate the porcelain table top. To those who hitherto could not afford electric refrigeration, the Crosley Chest Shelvador is the boon of boons. Now they need wait no longer for the food hygiene, economy, and convenience that only electric refrigeration provides. Others find it a marvelous convenience as an auxiliary electric refrigerator—both for food storage and beverage cooling.



For the many who need a second electric refrigerator to place, for example, in the entertainment room or pantry, the Crosley Chest Shelvador is ideal. It is compact, remarkably economical in operation, low in price, easily moved. It also makes an excellent beverage cooler.

In summer camps and cottages where electricity is available, the Crosley Chest Shelvador will be welcomed, with its ample supply of ice cubes—not less than two pounds—and its surprising roominess.

Small delicatessens, roadside stands, sandwich shops and other places with moderate electric refrigeration requirements will find the Crosley Chest Shelvador ideal.

In hospitals or other institutions where individual refrigeration is desirable this model, with its table top, will be found useful.

Remember that the Crosley Chest Shelvador has every essential Crosley Shelvador feature—the same quiet, economical, long-life, trouble-free cooling unit that has made Crosley electric refrigerators famous—the same Shelvador convenience that adds greatly to the "usable" capacity. See your Crosley distributor at once—learn all about this new Crosley Chest Shelvador and how it opens up to you an entirely new and practically untouched market for electric refrigerators. No dealer can afford not to handle Crosley!

Montana, Wyoming, Colorado, New Mexico and west, prices slightly higher.

The Crosley Radio Corporation

(Pioneer Manufacturers of Radio Receiving Sets)

Home of "The Nation's Station"—WFL—500,000 watts—most powerful in the world—70 on your dial

POWEL CROSLEY, Jr., President

CINCINNATI

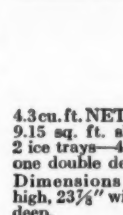
Crosley, Shelvador and Tri-Shelvador models represent the greatest value in the history of electric refrigeration. Incorporating the famous Crosley Shelvador and other features, they are the outstanding successes of the 1934 season.

Illustrated below are household electric refrigerators for every purse and purpose.



3.5 cu. ft. NET capacity, 7.5 sq. ft. shelf area, 2 ice trays—42 cubes. Dimensions: 48½" high, 23½" wide, 24½" deep.

Model EA-35.....\$99.50



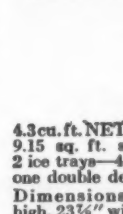
4.3 cu. ft. NET capacity, 9.15 sq. ft. shelf area, 2 ice trays—42 cubes—one double depth tray. Dimensions: 54½" high, 23½" wide, 24½" deep.

Model EA-43.....\$117.00



5.5 cu. ft. NET capacity, 11.6 sq. ft. shelf area, 3 ice trays—63 cubes—one double depth tray. Dimensions: 55½" high, 29" wide, 25½" deep.

Model EA-55.....\$145.00



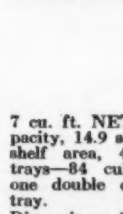
4.3 cu. ft. NET capacity, 9.15 sq. ft. shelf area, 2 ice trays—42 cubes—one double depth tray. Dimensions: 56½" high, 23½" wide, 24½" deep.

Model E-43.....\$135.00



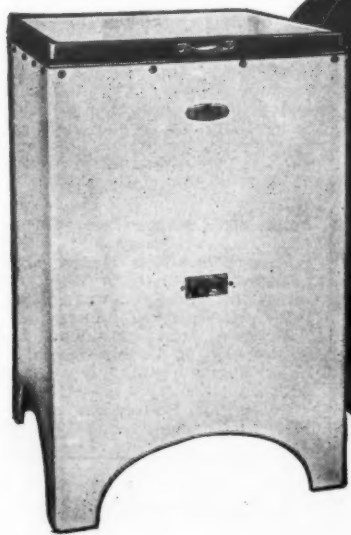
5.5 cu. ft. NET capacity, 11.6 sq. ft. shelf area, 3 ice trays—63 cubes—one double depth tray. Dimensions: 57½" high, 29" wide, 25½" deep.

Model E-55.....\$157.50



7 cu. ft. NET capacity, 14.9 sq. ft. shelf area, 4 ice trays—84 cubes—one double depth tray. Dimensions: 58½" high, 32½" wide, 26½" deep.

Model E-70.....\$185.00



\$72.50

DELIVERED—INSTALLED
ONE YEAR FREE SERVICE

● This refrigerator is amply large for the preservation of

the actual amount of food necessary in the average home, and is one for which many have been waiting and practically everyone can afford. Here—as in the most expensive Crosley model—is found the amazing Shelvador feature which provides space for small articles that in ordinary refrigerators are difficult to find and take up much room.

ALL PRICES INCLUDE DELIVERY... INSTALLATION... ONE YEAR FREE SERVICE

CORPORATE HISTORY—Continued

(Continued from Page 4, Column 5)
operated by Glacier, Inc., both of the above address.

The latter was a holding company of patents used by the International Refrigerator Corp.

Canton was formerly president of the Canton Corp., and had been identified with the inventing of electrical devices for some years.

He was president of the International Refrigerator Corp., which was petitioned into bankruptcy on July 2, 1930. He was also secretary and treasurer of Glacier, Inc.

Activities were mainly experimental and of a research nature. Manufacturing was to be done by outside concerns on contract.

The company was dissolved during the early part of 1933.

Care-Free—see Automatic Freezer Corp.

Castle Refrigerating Machine Co. (not inc.)

Last known address:
138 Neal Ave., Indianapolis, Ind.

An early pioneer in automatic refrigeration, the business had been in existence for many years. Started under the name of Castle Engineering Co. This company was not successful and in June, 1908, business was placed in hands of a receiver and sold in June, 1911. Bought by Frank Hilgemeier who sold it to R. E. Castle. Castle operated business for a short time but later retired; and since Aug., 1915, O. H. Castle and G. W. Castle have been active in the business; it was chiefly owned by R. H. Castle.

Manufacturers of ice and refrigeration machinery. According to ERN, the company manufactured NH₃ compression and absorption machines from 1 ton and up.

A report of Aug. 24, 1934, stated business was discontinued in 1930. At that time, machinery, patents, and equipment were purchased by Adolph Aneshensel who lives at 5500 S. Meridian St., Indianapolis, Ind.

In 1931, Railroad Men's Building & Loan Association foreclosed mortgage on real estate and now holds title to property. G. W. Castle, formerly one of partners, is now dead and R. H. Castle moved to California.

Cavalier—see Tennessee Furniture.

Central Machine Co.

Present address:
1050 Mt. Elliot Ave., Detroit, Mich.

Incorporated April 24, 1917, (Michigan), succeeding the Detroit Die & Tool Co.

Officers and directors (1934): A. J. Schramm, pres.; J. H. Wettlaufer, v. p.; E. A. Dreyer, secy.; and Robert A. Puffer, treas. A. J. Schramm is the only officer active in the management of the business. They have been at the above address since 1929.

They operate a machine shop manufacturing parts for leading automobile manufacturers, and made a refrigeration unit for installation in ice boxes. The units were manufactured and assembled on a small scale, cabinets being purchased. The assembled refrigerators were sold under the trade name "Cadillac."

The business is still in active production of automotive products, but the refrigeration manufacturing operation is at a standstill.

Cercold Electric Refrigeration Co., Inc.

Last known address:
3427 S. Main St., Los Angeles, Calif.

Incorporated in March, 1929, (Nevada) this corporation succeeded business formerly known as California Electric Refrigerator Co. A Mr. Karls was president of the concern from its inception until Sept. 1, 1929, when he withdrew.

Officers reported on April 9, 1930 were George Zeeman, pres. and secy.; Thomas M. Bridges, v. p. & treas.

Manufactured household electric refrigerator units and household ice boxes, and appeared in 1930 to be making some little headway. Some units were sold on lease contracts.

Involuntary petition in bankruptcy was filed Sept. 13, 1930 by Chase Brass & Copper Co., Madison Iron Works and S. C. Carter Co., Inc. R. R. Turnbull was appointed referee.

Champion Shoe Machinery Co.

Present address:
3711 Forest Park Ave., St. Louis, Mo.
Refrigerating machines were manufactured by Champion Electric Co., subsidiary.

Champion Shoe Machinery Co. incorporated Nov. 6, 1903 (Missouri). Company reorganized August, 1927.
Officers (1934): Stevenson A. Dobyne, pres.; John J. Hoge, vice pres.; John C. Dobyne, secy.-treas. Directors: Officers A. Marcelli, Meredith C. Jones, Robert E. Moloney, and Charles B. Sears.

In ERN May 25, 1927, the following executives were given for Champion Electric Co.: George A. Dobyne, pres.; S. A. Dobyne, general manager and chief engineer; Charles Vogler, purchasing agent; Stanley C. Bell, sales manager (now refrigeration sales manager of Williams Oil-O-Matic Heating Corp., Bloomington, Ill.).

Champion Shoe Machinery Corp. now manufactures shoe machinery. According to ERN, Champion Electric Co., subsidiary, manufactured household and commercial machines, motors, pumps, condensers, and expanders. Trade name of refrigerating machines was "Champion Electro Icer."

The "Champion Electro Icer" had a reciprocating compressor, flooded system, used SO₂ as refrigerant, had a float valve and pressure control, 1/2, 1/4, and 1/8-hp. Wagner motors were used. Rex and Seeger cabinets were used.

Manufacture of electric refrigerators was discontinued in 1927 and the refrigeration business was still in process of liquidation in the fall of 1932.

It is believed refrigeration interests were sold to Zerzone Refrigeration Corp. of Chicago.

Chicago Pneumatic Tool Co.

Refrigeration laboratory:
6201 Second Blvd., Detroit, Mich.

A large manufacturer of tools and machinery operated by air pressure. Maintains a refrigeration laboratory at the Detroit factory where considerable research has been done in household and commercial refrigeration for several years past, but to date nothing has been introduced to the field. R. W. Davenport is the chief refrigeration engineer.

Chilkoot—see Armstrong Machinery.

Cir-Cul-Air Refrigerator Corp.

3333 Lindell Blvd., St. Louis, Mo.

Clago Mfg. Corp.

Present address:
307 N. Michigan Ave., Chicago, Ill.

Organized 1928 as the Mercantile Clearing House, Inc. (Illinois), to wholesale radios and cabinets. October, 1929, changed name to Clago Radio Corp.

June, 1930, began manufacturing radio chassis, and in 1932 added manufacture of low-priced electric refrigerator. Also changed name to Clago Mfg. Corp.

Business first located at 1411 Michigan Ave., later moved to 1737 S. Michigan Ave. Moved to 307 N. Michigan Ave., March 1, 1932.

Officers and directors (1932): W. C. Perkins, chairman of board and v. p.; Clarence R. Clago, pres.; Robert B. Rose, v. p.; Edgar S. Riedel, v. p.; Frank P. O'Hara, secy.-treas.

Clago was partner in Union Stove and Refrigerator Co., unincorporated, 1912 to 1917. Perkins was one of organizers and later president of U. S. Radio & Television Corp.

Rose was at one time vice president and general manager of Metrice of America Co., Ltd., and was formerly merchandise manager for Macy & Co. Riedel was for several years connected with Goodrich Rubber Co., and later assistant sales manager for Grigsby-Grunow Co.

Most of the parts for the refrigerator were manufactured by outside companies on contract, and assembly was done by Clago in Chicago. Compressors were built in the Excelsior Motor Cycle plant.

Refrigerators were sold to department stores under the name "Clago," and to distributors under the name "Clago-Kold."

A. P. Anderson and Mr. Constantine (now with General Household Utilities) were in charge of engineering. First machine was a small hermetic, but this was abandoned in favor of a two-cylinder, direct-drive machine with a seal ring. About 1,500 of the direct drive machines were built. Sulphur dioxide was the refrigerant.

Dec. 16, 1932, records of the U. S. District Court showed involuntary petition in bankruptcy filed against Clago Radio Corp., chief claimant being the Century Electric Co., St. Louis, Mo. Other claimants were Imperial Brass Mfg. Co., Chicago, and Automatic Reclosing Circuit Breaker Co., Columbus, Ohio.

Dec. 19, 1932, the bankrupt was represented by Thomas J. Linane. C. A. Wiloughby was appointed receiver with special reference to Referee Parkin.

On Jan. 3, 1933, Judge Carpenter gave leave to the receivers to accept the bid of Paul Ginsburg, of \$1,200 for the assets.

Cleveland Iceless Cooler Co.

Last known address: 3901 Superior Ave., N.E. Previous address: 971 East 63rd St., Cleveland, Ohio.

Organized November, 1924 (Ohio), succeeding Iceless Liquid Cooler Corp., which had been organized January, 1924 (Ohio). Old company developed newly invented iceless cooling device, operated by electricity and used principally for cooling beverages.

Kold Stream units had single cylinder, belt-driven rotary compressors, used SO₂, and had 1/4-hp. motor. Thermostatic control. They were built in both pressure and bottle types. Condensers were air cooled.

Officers (1929): Elbert H. Baker, Jr., pres. & treas.; John T. Barker, v. p.; Harold H. Burton, secy. Baker and Barker also identified with Locke Machine & Mfg. Co., same address.

Company in 1929 was in the experimental and development stage and not actually in the general market.

Company changed name to Koldstream, Inc., spring of 1929 and moved to 3901 Superior Ave., N. E.

Climax Engineering Co.

Present address:
1812 South Fourth St., Clinton, Iowa.

Incorporated January, 1917 (Delaware), and April, 1923, took over Clinton Refrigerating Machinery Co., merger becoming effective June 1, 1923.

Executives (May 25, 1927, ERN): G. W. Dulaney, Jr., pres. (Chicago); E. T. Benkman, v. p. (Rock Island, Ill.); J. M. Thomson, secy.; M. M. Cruise, treas. (Chicago); R. C. Rowan, gen. mgr. (Clinton); R. L. Alexander, mgr. ref. dept. in chg. of engr.; J. N. Palmer, adv. mgr. ref. dept.; Walter Johnson, pur. agt.

Executives (Oct. 12, 1927, ERN): G. W. Dulaney, Jr., chairman of board; E. B. Mallory, pres.; E. S. Deacon, v. p.; D. W. Eberhart, Jr., treas.; J. M. Thomson, secy.; R. L. Alexander, director of engr. & mfg.; J. N. Palmer, director of publicity; Walter Johnson, pur. agt.; T. W. Albertson, research engr. The firm was listed in ERN as the subsidiary of G. W. Dulaney Trust Co. of Chicago, Ill.

Executives (April, 1934): E. S. Deacon, pres.; W. E. Eberhart, v. p.; J. M. Thomson, secy.; S. N. Robb, asst. treas. Directors: G. W. Dulaney, Jr.; C. A. Armstrong; E. S. Deacon; E. T. Denkman; G. W. Dulaney; W. E. Eberhart; Richard Spencer; and J. M. Thomson.

Manufactures internal combustion engines for industrial purposes under the name "Blue Streak" and Climax Trustworthy.

The company's chief activity in refrigeration was a commercial machine. According to Nov. 9, 1927, ERN, commercial machines were both rotary and reciprocating, driven by Wagner motors. Used ammonia or methyl chloride as refrigerants.

I.M.E. capacities of the household units were: model G, 75 lbs., model F, 150 lbs., model E, 300 lbs. Motor sizes were as follows: model G, 1/4 hp., model F, 1/2 hp., model E, 1/2 hp., these being household machines.

The company developed a novel household refrigerating unit and J. R. McCallum brought it to Detroit for further development in the Universal Cooler laboratory, but the machine never went into quantity production. McCallum is now engineer with the air-conditioning department of Chrysler Corp.

Clothel Refrigerating Co., Inc.

Last known address:
100 East 42nd St., New York, N. Y.

Company formerly had office at 61 Broadway, New York City, and moved to 96 West Seventh St., Bayonne, N. J., with New York office at above address.

The company was organized to manufacture refrigerating machines. Records of the U. S. District Court, dated June 7, 1924, show that an involuntary petition in bankruptcy was filed against Clothel on that date. I. L. Rice, Jr., of Hartsdale, N. Y., and W. L. Dill of Paterson, N. J., were appointed receivers.

On June 7, 1926, the affairs of the company were in the hands of a board of trustees composed of Isaac L. Rice, Jr., Wm. L. Dill, and Isaac Gross, attorneys, Jersey City, N. J.

Cold Blast Refrigerator Co.

Chicago, Ill., and New York, N. Y.

Compression system machine for household use.

Cold Storage Refrigerator Co.

Eau Claire, Wis.

Manufactured commercial cabinets and display cases. Its business was taken over by Eau Claire Cold Storage Corp. in 1931.

Cold Unit Refrigerator Co.

Chicago, Ill.

An air machine invented by W. H. Cotton. Small compressor running at 1,100 r.p.m. Mounted atop the refrigerator. Compressor drove air into four connected tubes placed against sides of the refrigerator. Air was the refrigerant. (Sept. 12, 1928, ERN.)

Coldak Corp. Last known address:

1775 Broadway Ave., New York City. (Said to have moved to Long Island City, N. Y.—exact location unknown.)

Incorporated Jan. 15, 1926 (Delaware). Succeeded the Multicold Co. of Providence, R. I. Headquarters were formerly at 8 West 40th St., New York, and later moved to the above address.

Factories were located at Springfield, Mass., Providence, R. I., and Muskegon, Mich. According to the Sept. 11, 1926, ERN, the company was then managed by the J. B. White Management Corp. Officers (Feb. 2, 1927, ERN): J. H. Pardee, pres.; A. P. de Sass, v. p. & gen. mgr.; T. W. Moffat, secy.-treas.; T. E. Spence, sales mgr.; J. W. Welles, adv. mgr.; H. J. Smith, chief engr.; W. R. Wilson, prod. mgr.; E. T. Wiley, serv. mgr.

In the Aug. 17, 1927, ERN, the officials were: J. H. Pardee, pres.; E. J. Rock and C. M. Burnhome, v. p.s.; T. W. Moffat, treas.; H. B. Brown, secy.; Hazen J. Smith, chief engr.; C. B. Shepard and W. A. Blackwood, asst. enrgs.; J. J. West, sales mgr.; W. B. Reed, serv. mgr.

According to a report of Feb. 14, 1929, the officers were as follows: Henry F. Ryer, v. p., secy.-treas.; Mary Keating, asst. treas. The directors consisted of J. B. Kreischer, R. R. Hayes, F. S. Strahan, Willard Reid, H. F. Ryer, and R. A. Pritchard.

On March 4, 1926, the Coldak Corp. of New England was incorporated under Massachusetts laws as a selling organization but was discontinued in 1927.

Stock of the Alaska Refrigerator Co., incorporated Aug. 21, 1921 (Michigan), was acquired by the Coldak Corp., October, 1926.

The company had its machines manufactured by Liberty Tool & Gauge Co., Providence, R. I., and by Metal Saw & Machine Co. of Springfield, Mass. The former company discontinued manufacture of these machines for Coldak during November, 1927, and the latter company ceased the manufacture late in 1927.

Coldak machines used ethyl chloride in a direct-driven, compound rotary gear compressor, installed below the food compartment. Pressure controls were used.

Alaska Refrigerator Co. of Muskegon and also the Philadelphia Coldak Co. of 1110 Duncannon St., Philadelphia, were both controlled by the Coldak Corp., through stock ownership.

Reported as a manufacturer of electric refrigerators for household and commercial use in ERN May 25, 1927. Cabinets were then being supplied by Alaska, Seeger Refrigerator Co., St. Paul, Minn., and Reol Refrigeration Co. of Baltimore.

According to a report of September, 1932, the company moved to Long Island City to exact location not learned, and in Dec. 28, 1932, ERN stated that it was absorbed by Metal Saw & Machine Co., Springfield, Mass.

Colonial Mantel & Refrigerator Co., Inc.

Last known address:
494 Dumont Ave., Brooklyn, N. Y.

Incorporated Sept. 8, 1909 (New York). Officers: Max Silverstein, pres.; Hyman Silver, secy.-treas. Silverstein in 1934 is identified with the F. Frishman & Son, Inc., manufacturers of furniture, at 860 Flushing Ave., Brooklyn, N. Y.

Corporation discontinued August, 1931, disposed of merchandise, and paid creditors in full.

Commerce Pattern Foundry & Machine Co.

Present address:
2211 Grand River Ave., Detroit, Mich.

Incorporated July 7, 1922 (Michigan), succeeding the Commercial Pattern & Mfg. Co. organized in 1917 (bankrupt in 1921).

Officers and directors (1924): E. J. Rousseau, pres.; L. J. Rousseau, secy.; R. J. Rousseau, treas.

Commercial Pattern Foundry & Machine Co. now manufactures brass and aluminum castings, sheet metal stampings, tools and dies, and does special machine work, mainly selling to local automobile industries.

In 1931 or 1932 the firm built complete electric refrigerators, making three models. Systems were of conventional type, using reciprocating compressors, SO₂ as refrigerant, expansion valves, Ranco controls, McCord condensers, and 1/8-hp. motors. Seeger cabinets were used.

Refrigerators were mainly sold to department stores in the east.

According to the Detroit office of the Refrigeration Division of Nema, they sold out refrigeration interest to Noma Refrigerator Co., 1933.

Trade names of the refrigerators manufactured were "Arctic Aire" and "Commerce."

Commercial Auto Body Co.

5401 Bulmer Ave., St. Louis, Mo.

Common Sense Ice Machine Co.

Last known address: 1844 West 14th St. (Previous address: 385 Dearborn Ave., Chicago, Ill.)

Incorporated 1920 (Illinois). Officers (1927): Herman C. Fritz, pres.; Henry H. Holder, v. p.; Edwin O. Fritz, secy.; Orray T. Knight, treas. Directors: Officers and George G. Foster.

This was an absorption machine of the intermittent type, and was built in three sizes, 125, 250, and 500 lbs. of i.m.e. per 24 hours, figured on the basis of 3 1/2 cycles per day. The machine was operated by gas, and had water-cooled condensers.

Oct. 25, 1927, it was reported they were doing a good volume of business, having contract with large public utility company to take their entire output of machines. Meeting of stockholders held July 19, 1928, for purpose of voting on question of whether to dissolve corporation. Jan. 25, 1929, it was stated that business had been discontinued.

Comstock & Westcott

Present address:
175 Fifth St., Cambridge, Mass.

This company has under development a novel refrigerating system employing a mercury jet compressor to pull a high vacuum over water to produce evaporation and refrigeration. The system is claimed to be adaptable to household refrigeration, commercial, or air conditioning, but to date it has not been introduced to the market commercially.

Connecticut Refrigerator Co.

Last known address:
141 State St., New Haven, Conn.

Organized April 19, 1927, (Connecticut). Incorporators: George J. Rouser, Nathan Winnick, Walter Johnson.

Johnson was president and Rouser, secy.-treas. of Federal Supply Co. dealer in bottlers supplies, also located at above address.

George J. Rouser stated in December, 1927, that company had been discontinued.

Cooke Electric Refrigeration Co.

Last known address:
30 North Green St., Chicago, Ill.

Incorporated Jan. 10, 1927 (Illinois), succeeding to business operated by George J. Cooke, individually. Cooke had been experimenting with refrigerating machines for several years previous.

Cooke, together with Alexander Cullen, made the first gas-fired refrigerator in 1890 at Notre Dame, it being used to cool beer in his father's saloon.

According to ERN, May 25, 1927, officers were: George J. Cooke, pres. and treas.; George J. Cooke, Jr., v. p.; Robert E. Cooke, secy. However, in a report of Jan. 27, 1931, George J. Cooke, former president was no longer an officer in the company and the position was vacant, because his interests had been taken over by creditors of the George J. Cooke Co., of which he was president.

Henry C. Murphy, chairman of the board of the American National Bank of Woodstock, Ill., was a director of the company, and George C. Gilman, president of the Inland Rubber Co., was also a director.

On Jan. 27, 1931, the company was listed as a manufacturer of household, commercial refrigerating machines, and ice cream cabinets. The refrigeration system had a reciprocating compressor, used ammonia as refrigerant and had a temperature control.

According to ERN Nov. 9, 1927, two models were made, model 15, having a 1/2-hp. motor and model 40 having a 1/4-hp. motor. Both machines were for remote installation.

On Sept. 24, 1931, records of the Circuit Court of Sept. 2, 1931, show that Herman Rothenberg, stockholder, filed a bill to restrain selling any of the assets or from receiving or disbursing any sums received from royalties. The corporation was reported inactive at that time and no knowledge could be had as to what final disposition would be made.

The Cooke seal ring for refrigeration compressors, and an invention of the Cooke brothers, was manufactured by the Cooke Seal Ring Co. at the same address.

Production of the Cooke compressor seal was discontinued in 1931 or 1932, but patents were acquired by the Rotary Seal Co. (Chicago) and the seal is again being manufactured and sold for replacement purposes and for use in new refrigeration compressors of several large companies.

Couzens Ice Machine Co.

2112 First National Bank Bldg., Detroit, Mich.

Incorporated Dec. 7, 1925, (Michigan). Officers and directors: James Couzens, pres.; Frank Couzens, v. p.; Clarence E. Wilcock, secy.-treas.

James Couzens is U. S. Senator from Michigan, and formerly Mayor of the City of Detroit and at one time general manager of the Ford Motor Co.

Frank Couzens, son of James Couzens, is the present Mayor of Detroit, at that time was vice president of Frazer-Couzens Co., general contractors. Clarence Wilcock is an attorney.

In May, 1926 the company acquired plant of Superior Refrigeration Co., at Wapakoneta, Ohio. Offices were to be located at Lima, Ohio, as well as Detroit, with headquarters in Detroit.

In September, 1926, Senator Couzens decided to close the plant at Wapakoneta and discontinue the business. He stated that he was opposed to time-payment selling.

A. J. Deer Co.

Last known address:
Buffalo & West Sts., Hornell, N. Y.

Originally started by Wigan & Brown, A. J. Deer Co. of Buffalo being selling agents. Deer became interested in the corporation, moved to Hornell and took over active management. In December, 1908, the above company was incorporated (New York).

There were many changes in personnel, officers on April 3, 1930, being: A. J. Deer, pres.; L. C. Roberts, v. p. & treas.; J. R. Nesbitt, secy. Directors: Officers, A. M. Hill, E. W. Vogt, E. H. Williams, and H. B. Chamberlain.

Manufactured coffee mills, meat choppers, and refrigeration units.

Plans to introduce the electric refrigerator were announced in ERN, May 25, 1927. It was a two-cylinder SO₂ machine with 1/2 and 3/4-hp. motors. Condensers were finned tube, air-cooled type. It was sold under the trade-name "Royal" for commercial refrigeration systems.

On Feb. 25, 1931, the company filed a voluntary petition of bankruptcy, the matter being referred to E. M. Darrin of Addison, N. Y., as referee. Real estate and all principal assets of the A. J. Deer Co. were offered for sale by the trustees Nov. 19, 1931.

Devon Mfg. Co.

Present address:
2 Brooke St., Brighton, Mass.

Acquired a patent on the "Odin" refrigerator (using air as a refrigerant) from Automatic Refrigerating Co., Hartford, Conn., and has been developing it for commercial use ever since. Uses a reciprocating compressor, driven by a 1/2-hp. motor, producing about 200 lbs. of i.m.e. Principal designer of machine was I. Lundgaard. C. O. Ward is gen. mgr. of the company.

Domestic Electric Refrigerator Corp.

Last known address:
305 East 42nd St., New York, N. Y.

Incorporated July 28, 1926 (Delaware). Executives given in ERN July 20, 1927: Julius Fleischmann Holmes, pres.; Fred Allison, v. p.; A. L. Kull, v. p. and gen. mgr.; H. L. Shields, secy.-treas.; John A.

(Continued on Page 8, Column 1)

Calco

SO₂

SULPHUR DIOXIDE

TRIPLE DISTILLED

A PRODUCT OF
• QUALITY FOR REFRIGERATION

150 lb. Cylinders

THE CALCO CHEMICAL COMPANY
INCORPORATED
BOUND BROOK • NEW JERSEY
BOSTON • PHILA. • NEW YORK • CHARLOTTE • CHICAGO
A Unit of American Cyanamid Company

PACIFIC COAST REPRESENTATIVE
FRANKLIN G. SLAGEL</

Official Interpretation of Electric Refrigeration Code Is Given

(Concluded from Page 5, Column 5)

ing the action of any employee, agent or representative of another." This provision was inserted to put an end to the practice of certain manufacturers paying commissions to a dealer's salesman as a reward for pushing the sale of that manufacturer's line rather than competitive lines which the dealer might be handling.

8. Does this prevent the manufacturer from conducting prize contests among retail salesmen?

No. Prize contests OPENLY CONDUCTED among salesmen are specifically construed as not coming under the commercial bribery provisions.

9. Is the giving of premiums to purchasers prohibited?

The Code has such a provision but the Administrator in approving the Code on June 9, 1934, stayed this provision pending his further order.

10. What about threats of patent litigation?

Manufacturers are prohibited from making threats of patent litigation against competitors, not made in good faith and for the purpose of harassing and intimidating customers.

(b) Advertising and Sales Provisions

1. What form of activity is covered by this term?

The Code states that the term shall have the broadest possible interpretation and apply without limitation to magazine and newspaper advertising, billboards, radio, house organs, catalogues, direct mail material and all forms of printed OR VERBAL advertising and sales promotional activities.

2. What type of competitive statements are prohibited?

False, untrue, misleading or deceptive statements, either directly or by inference, concerning the materials used, operating characteristics, quality, size, origin, or preparation of any product of the industry (one's own or one's competitor's).

3. How is the uninformed or casual reader protected?

By the prohibition of statements calculated to mislead the uninformed or casual reader and the provision that all statements must be complete and so phrased as to give such readers the full and complete facts.

4. What about "bait" advertising?

Manufacturers are prohibited from advertising products which are not intended to be openly and freely sold, with the object of attracting customers in order to sell them some other product.

5. May competitive products be used?

No. They must not be used, directly or indirectly, for comparison.

(c) Warranty and Service Policy

1. How long a warranty is permitted?

No manufacturer may give a warranty for longer than one year, unless exceptions are granted by the Supervisory Agency.

2. Is it permissible for a manufacturer to provide for unit replacements for a fixed sum after the expiration of the one year warranty?

Yes, provided that all advertising clearly differentiates between the one-year warranty and the unit replacement plan and states clearly the extra amount charged for this protection.

(d) Terms of Sale

1. What terms of payment may be extended by manufacturers to their distributors?

All sales shall, whenever feasible, be made sight draft attached to bill of lading.

2. In case open account privileges are granted, how long terms may be given?

The Code specifies that in no case shall open account be extended beyond the 20th prox., unless accounts beyond that date are evidenced by a negotiable INTEREST-BEARING instrument.

3. In such cases, what rate of interest may be charged?

Annual rate of 6 per cent, or the maximum legal rate, whichever is lower.

4. What about over-due accounts?

Manufacturers are compelled, under the Code, to charge interest on all over-due accounts at an annual rate of 6 per cent, or the maximum legal rate, whichever is lower.

5. Are any exceptions possible to the above terms?

Yes, the Supervisory Agency has the power to approve special provisions from time to time.

(e) Method of Enforcement

1. How should complaints of violation of the trade practice provisions of the Code be made?

Complaints should be filed with the Secretary, Trade Practice Complaints Committee, Code Authority for the Electrical Manufacturing Industry, 155 East 44th St., New York City.

2. What happens then?

The Supervisory Agency will cause an investigation to be made to establish the facts.

3. What is the next step?

If the investigation shows that there is a presumption that the Code has

been violated, the Supervisory Agency will request the offender to refrain from the offending practice.

4. And if he repeats or continues the offense?

The Supervisory Agency will then refer the matter through the proper channels to the Administrator for such action as he deems proper.

5. In case of an investigation, how are the trade secrets of a manufacturer protected from his competitors who are members of the Supervisory Agency?

The Code specifically provides that investigations involving such matters shall be made by someone not employed by any member of the industry.

6. Is there any appeal from decisions of the Supervisory Agency?

Yes. The Administrator may at any time suspend, pending his investigation, any action of the Supervisory Agency which he believes may be unfair or unjust or contrary to the public interest.

7. How long may such actions be suspended?

Final action shall not be effective unless the Administrator approves, or fails to disapprove, after 30 days notice.

8. In what spirit will the Supervisory Agency operate?

It will follow the clearly expressed policy of the NRA to use every effort to effect voluntary compliance with the Code. Only when all efforts of education, mediation and conciliation have failed, and it is apparent that the offender is a wilful and deliberate violator, will the penal provisions of the National Industrial Recovery Act be invoked.

NRA Makes Realignment In Code Groupings

WASHINGTON, D. C.—The NRA last week announced a virtually complete realignment of its code groupings to conform to a new fundamental classification of all industries and trades.

One classification embraces the manufacturing of "use goods"—from household appliances to musical instruments.

Keynote of the classification is recognition of 22 classes within which every known industry or trade has a definite place.

Distribution of goods, wholesale and retail, will comprise another classification.

The code mergers which are expected to result eventually will take place between units of almost identical economic interest whose separation at this time is based on what the NRA

labels "arbitrary and personal rather than economic reasons." A tentative objective has been an overall total of about 250 parts instead of the present 682.

Trade associations will be encouraged to retain their separate identities even when the code group is merged. At present some codes actually embrace as many as 30 separate trade associations, each collecting statistics and carrying on technical work under the general supervision of the master code group.

Russ System Cools Beer In Minneapolis

MINNEAPOLIS — Russ beer dispensing system with G-E refrigeration was sold to the Ben Moses Buffet here by Dewey Edson, commercial manager of O. F. Stuefer, Inc. after Moses had placed an order for a low-pressure coil box.

ROOKIE WINS PLACE IN REGULAR LINE-UP

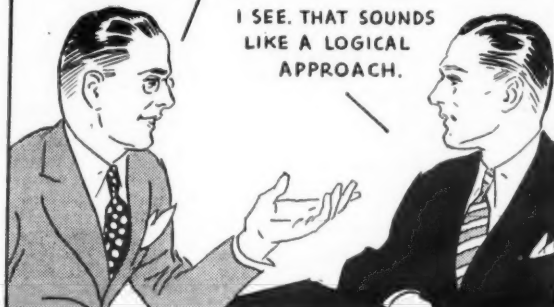
INASMUCH AS YOU'RE NEW IN THE SELLING BUSINESS, MR. HARRISON, I WANT TO GIVE YOU A COUPLE OF TIPS BEFORE YOU START OUT WITH US.

THANKS, MR. BOYD I'LL CERTAINLY APPRECIATE THEM.



WHEN YOU'RE TRYING TO INTEREST A PROSPECT IN A REFRIGERATOR, IT'S WELL TO START IN WITH SOME ONE FEATURE THAT'S SURE TO APPEAL TO HIM. THAT AUTOMATICALLY LEADS TO OTHER FEATURES AND THE FIRST THING YOU KNOW YOU'VE GOTTEN YOUR SALES STORY OVER.

I SEE. THAT SOUNDS LIKE A LOGICAL APPROACH.



YES. AND WE'VE FOUND FROM EXPERIENCE THAT TWO OF THE THINGS THAT APPEAL MOST TO PRACTICALLY EVERY PROSPECT ARE FLEXIBLE RUBBER TRAYS AND GRIDS.

OH YES -- I CAN UNDERSTAND THAT-- WE USE THEM AT HOME



WELL, THAT'S IT. THEY'RE IMMENSELY POPULAR. MORE THAN A MILLION WERE SOLD LAST YEAR ALONE. AND THIS YEAR, 90% OF ALL AUTOMATIC REFRIGERATORS BUILT ARE EQUIPPED WITH THEM.

NO WONDER THEY MAKE SUCH A GOOD ENTERING WEDGE ON A SALE!



THAT'S RIGHT. THEY'RE GREAT DOOR OPENERS, TOO, ON COLD CANVASSING. USE THEM FOR GETTING EXTRA LEADS. SELL THEM TO PRESENT REFRIGERATOR OWNERS WHO ARE STILL USING METAL TRAYS. FEATURE THEM EVERY CHANCE YOU GET.

I SURELY WILL, MR. BOYD. AND THANKS A LOT FOR THE TIPS.



MONTH LATER

FRED, I WANT TO COMPLIMENT YOU ON THE FINE SHOWING YOU'VE MADE YOUR FIRST MONTH WITH US. I'VE KNOWN A LOT OF OLD-TIMERS WHO COULDN'T DO HALF SO WELL.

I GUESS I'LL HAVE TO GIVE A LOT OF THE CREDIT TO YOUR TIPS ABOUT FLEXIBLE RUBBER TRAYS AND GRIDS, CHIEF.



It will pay you to insist that Flexible Rubber Trays and Grids be included as standard equipment in all the refrigerators you sell. By so insisting, you'll sell more refrigerators—and sell them easier.

Easy way to cut down cost of Training New Salesmen

Starting new salesmen off on the right foot—and passing good sales ideas along to old ones—is one of the jobs every sales manager must continually face.

The shrewdest of these business getters is the one who lets Flexible Rubber Trays and Grids do part of this work—as illustrated above.

There's a tremendous market for these modern time and trouble savers. It seems as though everybody knows about them and wants them.

For example, more than a million were sold last year alone and sales are now over 250,000 a month, 90% of all automatic refrigerators manu-

factured are equipped with them. No wonder they're so easy to sell to present refrigerator owners. And they're THE features to stress when trying to make a refrigerator sale to a prospect.

In fact, you can't call a refrigerator really modern unless it's equipped with Flexible Rubber Trays or Grids. That's why you ought to insist that they be included as standard equipment in every model of the refrigerator you sell.

It's the easiest way imaginable to increase sales and profits. So write to the manufacturer of your refrigerator—or direct to us—for full details.

THE INLAND MANUFACTURING COMPANY, DAYTON, OHIO

Flexible Rubber Trays and Grids

ICE CUBES . . . INSTANTLY . . . TRAY TO GLASS

CORPORATE HISTORY—Continued

(Continued from Page 6, Column 5)
Sturges, sales mgr.; George Hotte, sales prom. mgr.; H. R. Van Deventer, chief engineer.

In a report of April 18, 1929, the officers were: Julius Fleischmann Holmes, pres.; H. L. Shields, secy.-treas.; John A. Storgess, v. p. and dir.; Fred Allison, v. p.

A manufacturer of household electric refrigerators. The corporation was scheduled to start production of 35 machines daily on Dec. 1, 1927 (ERN Dec. 9, 1927).

The company made the "Allison" household electric refrigerator, the unit being made by Sharples Separator Co. of West Chester, Pa. (ERN, July 20, 1927).

The Allison unit was a rotary using ethyl chloride in a high-side float system. Motors and controls were built by Westinghouse (which owned patents on the machine).

At this time, Fred Wood, president of the Sharples Separator Co., was listed as a director, together with Holmes, Shields, Allison, Storgess, and H. H. Cudmore, formerly of General Electric.

By 1929 the company was inactive, although its charter had not been surrendered. The company was to continue for the convenience of its officers and engaged in no business.

On Aug. 25, 1930, the company was reported to be entirely out of business. The company was affiliated with Holmes Products, Inc., capital for both enterprises having been furnished from the fortune of the Fleischmann family. The Holmes company which was the principal corporation, filed certificate of dissolution in November, 1929. All creditors were paid in full.

H. R. Van Deventer, now consulting engineer of New York City, was the inventor of both Allison and Holmes machines. They were very similar in design, both using ethyl chloride. Service instructions on the Allison were published in ERN, May 30 and June 6, 1934.

Domestic Refrigerating Co.

Last known address: Coraopolis, Pa.
Built an ammonia absorption refrigerator under the trade-name "Doreco." Operated by gas heat, with water-cooled condensers.

Dubois Refrigerator Co., Inc.

Address as of Jan. 17, 1934:
133 East 16th St., New York City.

Incorporated May, 1899 (New York), as Dubois Mfg. Co., company changed name to Dubois Refrigerator Co. in July, 1917.

Original officers: Elias J. Moneuse, pres.; Louis H. Hout, v. p.; George P. Ahner, secy.-treas. Officers assuming control later: Henry A. Sturn, pres.; George P. Ahner, v. p.; Joseph A. Coloneuse, secy.-treas. Directors: Officers and Elias J. Moneuse.

Manufactured refrigerators on order for hotels, institutions, industrial buildings, and private residences.

Trade reports are given as of Jan. 17, 1934, but no information is given regarding the operation after that date.

Earnshaw Mfg. Corp.

Last known address: Baltimore, Md.
Previous address: Offices, 128 South 19th St., Factory, 21st and Washington Ave., Philadelphia, Pa.

Incorporated January, 1923 (Pennsylvania). Officers: Arthur R. Earnshaw, pres.; Warner S. Earnshaw, secy.-treas.

Manufactured refrigerating machinery and parts for household use. June 19, 1926, Arthur Earnshaw stated that he was acting as president and treasurer, and H. E. Bird, as secretary.

Jan. 8, 1927, it was reported that offices and plant had been moved to Camden, N. J., located in the Ship Building Yard of the New York Ship Building Co. (actually Gloucester City, N. J.). Company used trade name of "Frostic" for electric refrigerator.

A two-cylinder, slow-speed reciprocating compressor, driven by a 1/4-hp. motor by a belt. Refrigerant, SO₂. Furnished in self-contained household cabinets with from 5 to 16 cu. ft. capacity.

About April 1, 1927, the plant was moved to Baltimore, Md., at which time the corporation was reorganized.

Arthur R. Earnshaw and El. Park both severed their connections early in 1928.

The officers as given April 23, 1931, were: S. Proctor Brady, pres.; Dudley Shoemaker, v. p.; and Carl Wannen, secy.-treas. Brady was president of the Poole Engineering & Machine Co. of Baltimore. The corporation was said to be practically a subsidiary of the Poole Engineering & Machine Co.

The corporation manufactured the Calvert electric refrigerator, using the name

Calvert Electric Refrigerating Co. as a selling organization for distribution of the product.

Calvert machine had reciprocating compressor, belt-driven, and used SO₂. Had pressure control. Dry system with high-side float valve, used 1/4 to 1 1/2-hp. G-E and Century motors, and Rex cabinets.

Nov. 3, 1931, Carl Wannen, secy.-treas., stated that the Earnshaw Mfg. Co. was practically at a standstill doing only a small amount of business, consisting of servicing refrigerators sold.

On March 5, 1932, involuntary proceedings at bankruptcy instituted against the above by the U. S. District Court. On April 13, 1932, the company was adjudicated involuntary bankrupt and the case referred to Willis E. Meyers, referee.

Electric Refrigeration Co.

Newark, N. J.

Electric Sales Co.

Last known address: Corpus Christi, Tex.

Driven by a windmill, the "Remonte" refrigerating system of this company is intended for farm use. It uses SO₂ in a reciprocating compressor of special design. Provided with a vacuum auxiliary which provides refrigeration for a certain period after the wind stops blowing.

Electrical Refrigerating Co., Inc.

Last known address before absorbed by Serval: 36 Flatbush Ave., Brooklyn.

Incorporated Jan. 25, 1915 (New York), as Williams & Parker Co., name being changed to above Dec. 15, 1924. Corporation succeeded Westerberg & Williams, which had been established March 1, 1902, and was composed of Edward T. Williams and Charles Westerberg. Westerberg resigned December, 1911, and Williams continued alone.

Officers (1924): Edward T. Williams, pres.; W. O. Smith, secy.-treas.

Before becoming connected with Westerberg and Williams in 1902, Williams had been in the employ of New York Edison Co. He was also a director of Simplex Refrigerating Co., at 36 Flatbush Ave. (New York corporation dated May 2, 1919). Smith was also secretary and treasurer of Simplex Refrigerating Co., and he and Williams were looked upon as virtually controlling this company.

Electrical Refrigerating Co., Inc., had most of its parts made by others, and did mainly assembling.

In 1924 the company became sales agency for Serval Electrical Co., manufacturer of electrical refrigerators (a predecessor of Serval Sales, Inc., of New York City and Evansville, Ind.).

Company was taken over by Serval Refrigerating Co., 16 E. 42nd St., New York City in 1924.

E. T. Williams, a prominent refrigerating engineer, was active in organization of the Serval company, and served as consulting engineer for several years until 1934 when he severed his connection and established his own independent consulting engineering firm in New York City.

ElectRICE—see American ElectRICE.

Electro-Freeze—see Automatic Freezer Corp.

Electro Frost Corp.

Last known address: Naugatuck, Conn.

Incorporated Aug. 15, 1926 (Connecticut). Purchased assets of Lasher Co., which had been in a similar line of business. Because of financial difficulties, main assets of Lasher Co. were transferred to Naugatuck Lumber Co. J. J. Murphy was controlling factor in both Lasher Co. and Naugatuck Lumber Co.

Various changes were made in the personnel of Electro Frost Corp. Wm. J. Neary was at one time mentioned as president. About July 31, 1927, company became financially involved and by agreement of creditors, Arnold J. Grant was made temporary receiver Aug. 10, 1927.

Little progress was made and on Sept. 16, 1927, Philip M. Bernstein, Waterbury, Conn., attorney, was named receiver.

Remaining assets of company were sold early in 1928.

Company manufactured electric refrigerators and display cases.

Electro-Kold Corp.

Present address of E. S. Matthews, Inc., who took over the company:

151 South Post St., Spokane, Wash.
Incorporated May, 1923 (Washington), as Enterprise Mfg. Co. Name changed to Electro-Kold Corp., 1924.

In May 25, 1927, ERN officers listed were: X. L. Anthony, pres.; Charles J. Kimmel, v. p. & chief engr.; E. S. Matthews, secy.-treas. & sales mgr.; C. L. Lewis, gen. mgr.; H. L. Masterson, adv. mgr.; D. W. Mather, pur. agt.; Manuel Lassen, chief engr.

ERN Dec. 21, 1927, reported that L. M. Simpson had been elected president and general manager of Electro-Kold. He had been one of founders of the Washington Electric Supply Co. of Spokane, which was sold to Westinghouse and he had also developed several central stations. C. L. Lewis, general manager, resigned.

X. L. Anthony, former president, died in November, 1929, his estate continuing as a substantial stockholder. Officers (1930): E. S. Matthews, pres. & treas.; H. L. Masterson, v. p. & gen. mgr.; L. E. Gandy, secy.; Wm. F. Simpson, v. p. Directors: officers and John McKinley.

The company built up a wide distribution for its products along the Pacific coast and in South America and the Hawaiian Islands. In 1929, the capital structure was re-arranged by authorization of additional preferred stock.

On Dec. 16, 1931, Matthews stated that due to insufficient working capital, principal creditors of the company had been sent communications asking that a compromise be accepted at 50 cents on the dollar on accounts payable owing. He stated further that the majority of the creditors had been willing to accept this agreement.

Assignment was made Feb. 12, 1932, to benefit of creditors to J. D. Meikle, secretary of the Spokane Merchants Association.

Early in 1932, business was sold to E. S. Matthews by the Spokane Merchants Association and he subsequently formed E. S. Matthews, Inc., continuing business

at former address of Electro-Kold Corp. Electro-Kold Service Co., not incorporated (same address) maintains service on all old Electro-Kold machines, but has no connection with the former Electro-Kold Corp.

ERN May 30 shows that Matthews is operating under the name Electro-Kold, E. S. Matthews, Inc., at the same address and manufactures for distribution only in Electro-Kold retail outlets in Spokane and Seattle.

May 25, 1927, issue of ERN listed Electro-Kold Corp. as manufacturers of electric refrigerating units for household and commercial use, pumps, compressors, float valves, and control devices. Machines had reciprocating compressors used sulphur dioxide as a refrigerant, were equipped with pressure controls, and used Century, Wagner, G-E, and Emerson motors varying from 1/4 to 1-hp. capacity. Principal designer of the machine was L. J. Kimmel.

El-Frig-Ette—see Michigan Refrigeration

Eskimo Refrigeration Co.

Last known address:

914 Columbus Ave., Sandusky, Ohio.

The name was used by Grover L. Fisher in manufacturing electric refrigerators. In 1922 he was associated with Thomas Gore in the radio business buying Gore's interest in 1927. He also conducted a plating business and later manufactured electric refrigerators in a small way. The refrigerator business was discontinued in December, 1930. In 1932 he was reported in the radio business in El Paso, Tex.

Manufactured "Eskimo" household units. Methyl chloride machine with reciprocating compressor, belt-driven, temperature control, air cooled. Used 1/4 to 1/2-hp. motors. (April 25, 1928, ERN.)

Ever Kold Mfg. Co.

Last known address:

116 Key Highway, Baltimore, Md.

The original business was established in the spring of 1924 by Harold H. Nesbitt, being merged into a corporation in May, 1924 (Maryland), under the name Ever Kold Mfg. Co.

Officers (1928): H. H. Nesbitt, pres. & gen. mgr.; I. E. Byler, v. p.; H. A. Voight, secy.-treas.

Nesbitt was formerly connected with the Refrigerator Corp., started in February, 1923 (Delaware). This company had specialized in ice-making machinery. The corporation was located in the Union Trust Bldg., Baltimore, and discontinued business in the spring of 1924.

The "Ever Kold" machine used SO₂ and had a belt-driven reciprocating compressor. Pressure control. Direct expansion cooling. Used 1/4-hp. G-E motor.

Business premises occupied by Ever Kold Mfg. Co. were owned by Ralston Mfg. Co., which on Jan. 11, 1928, filed a petition in Circuit Court for authority to disclaim for rent but this claim was said to have been settled.

Several bills of complaint were said to have been filed in the Court during 1927 asking for appointment of receivers. In a report of Dec. 18, 1928, the company was reported to have discontinued business. Nesbitt was then president of Hartford Engineering & Machine Co., located at Aberdeen, Md.

Everite Products, Inc.

Address before Trupar took them over:

200 Davis Ave., Dayton, Ohio.

Chartered May, 1922 (Ohio). Occupied space in plant of Master Electric Co., and was closely connected with the Master Electric Co.

Officers (ERN, March 30, 1927): F. C. Geiler, pres. and gen. mgr.; B. K. Williamson, v. p. and sales mgr.; J. A. Whorlman, secy.-treas. Geiler, who also invented and developed the "Valley" electric refrigerator, was inventor of the machine used by Everite Products, Inc.

ERN, March 30, 1927, reported company taking over the lease of Iceola Corp. at Dayton in June, 1926, when company moved to Indianapolis, Ind.

In Fall of 1930, inventory and other manufacturing assets of Everite Products Co., Inc., were sold to Trupar Mfg. Co., 138 Davis Ave., Dayton, and the company ceased operations in refrigeration as Everite.

According to ERN, March 30, 1927, company manufactured household and commercial electric refrigerators in sizes from 5 to 20 cu. ft. The compressors were from 1/4 to 1/2-ton capacity. Also manufactured a water cooler and certain control devices.

Machines had reciprocating compressors, used sulphur dioxide as refrigerant, had a sectional cooling unit, and were equipped with pressure control. Company built its own metal cabinets.

Everkold—See Hartford Engineering.

Excelsior Motor Mfg. & Supply Co.

Present address:

3701 Cortland St., Chicago, Ill.

Incorporated January, 1912 (Illinois). According to ERN, June 22, 1927, executives were: Ignatz Schwinn, pres. & treas.; F. W. Schwinn, v. p. & gen. mgr.; J. M. Grossmith, secy.; M. W. Crawford, sales mgr. of refrig. div.; Gid Haynes, sales mgr.; W. G. Paulson, adv. mgr.; J. E. Anderson, pur. agt.; A. P. Anderson, chief engr. of refrig. div.; D. E. Rutishauser, mgr. of service engr. dept.

A report of June 5, 1933, gives these officers: Ignatz Schwinn, pres. & treas.; Frank Schwinn, v. p.; J. M. Grossmith, secy. The company manufactured Excelsior motorcycles for many years, but for the past few years has done little besides servicing and supplying parts.

In July, 1934, J. M. Grossmith, secretary, said the business had not been in operation for several months and they had discontinued the manufacture of motorcycles and no parts were being sold. He stated that activities were entirely experimental.

Manufactured household and commercial electric refrigeration units (June 22, 1927, ERN), pumps, compressors, control devices, drop forged flanged valves and fittings for ammonia service.

Commercial machines had reciprocating compressors, V-belt drive, American Radiator temperature control. Refrigerant was ammonia. Was water cooled and used Peerless pressure water valve. Used 1/2 to 2-hp. Century motors.

Refrigeration division of the company was absorbed by Carbondale Machine Co., Carbondale, Pa. (ERN, Dec. 28, 1932).

Fada Radio & Electric Corp.

24 Orchard St., Long Island City, N. Y.

Incorporated March 15, 1923 (New York), as the F. A. D. Andrea Co., Inc. On April 22, 1932, the name was changed to the above.

In April, 1932, outstanding capital stock of the Andrea Mfg. Co., Inc., was taken over. This had been formed on Oct. 30, 1923 (New York), and manufactured radio receiving apparatus distributed by the F. A. D. Andrea Co., Inc.

Officers (June 29, 1933): A. D. Andrea, pres. & treas.; G. A. Tamlyn, secy.; R. M. Klein, gen. mgr. The board of directors was composed of Andrea, Tamlyn, and Conetta.

Manufacturing radios, refrigerators, and electric laundry irons. Had concentrated on the manufacture of radios, but during the early part of 1932, added electric irons and electric refrigerators.

The refrigerator had a reciprocating compressor, belt-driven, used methyl chloride (Jan. 20, 1932, ERN).

During the latter part of 1932, the manufacturing of electric refrigerators was discontinued.

On Jan. 25, 1934, Thomas C. Walsh, secretary of a creditor's committee, stated that all creditors had signified acceptance of one of two alternatives offered for settlement of debts and that operations would continue.

On March 31, 1934, the following officers were reported: I. A. Proctor, pres.; Charles Glover, v. p.; and G. H. Tamlyn, secy. F. A. D. Andrea continues to serve in an engineering capacity.

Proctor was connected with radio industry since 1907 and was once president of the RCA Victor Co. of Massachusetts.

Fairfield Mfg. Co.

Fidelity Bldg., Portland, Me.

Also of Fairfield, Me.

Incorporated 1919 (Maine).

Office of president was originally held by Gilbert Oakley and John W. Thomas was treasurer.

On Dec. 13, 1932, Harold E. Weeks, local attorney, was appointed temporary receiver and on Jan. 5, 1933, he was appointed permanent receiver.

June 8, 1933, the company was reported not very active, manufacturing some colonial furniture of the reproduction type and a few refrigerators. Company formerly maintained an office at Portland, Me., having moved to Fidelity Bldg., from 193 Middle St. Financial headquarters were maintained at Fairfield, Me.

H. E. Weeks, receiver, stated May 9, 1934, that the affairs of the company had been finished up.

According to the May 25, 1927, ERN, company manufactured refrigerator cabinets only, using the trade-name "Everkold."

Federal Metal Products Corp.

Present address: 567 Ninth St., West New York, N. J. Formerly: 816 Clinton St., Hoboken, N. J.

Incorporated July 25, 1932 (New Jersey), by Federal Metal Bed Co., which was incorporated July 24, 1913 (New Jersey).

In 1927 control of Federal Metal Bed Co. passed to Albert Pick & Co. which owned 75 per cent of capital stock.

In 1931, Albert Pick & Co. went into bankruptcy, Federal Metal Bed Co. being taken over by Federal Metal Products Corp. in July, 1932. Latter company has one subsidiary, Montauk Metallic Bed Co., Inc., same address.

Designed a small refrigerating machine, rotary compressor, and offered it to the trade in 1930 and 1931 but made little progress with it.

Officers and directors (June, 1934): H. W. Lauderdale, pres.; H. B. Schroeder, treas.; Miss Cora D. Sawyer, secy.

Listed as a manufacturer of metal beds, built-in beds, furniture, and electric refrigerators, catering to builders and hotels throughout United States.

Femcold—See Fessler Mfg. Co.

Fern-Glover Refrigerator Co.

Linwood Ave. & Pa. R. R., Cincinnati, O.

Incorporated Sept. 16, 1927 (Ohio).

Officers Nov. 22, 1928, were: B. L. Fern, pres. & treas.; Aaron Kennedy, secy.

Fern had formerly been employed by others in the electric refrigerator line and was patentee of a refrigerator.

Manufactured electric refrigerator cabinets.

In April, 1921, he was instrumental in forming the Marblette Refrigerator Mfg. Co. (Ohio), being president and general manager.

The Marblette Refrigerator Co. was not successful and suit was filed against it by creditors asking appointment of a receiver, and in September, 1923, Edward F. Peters was appointed.

Fern later became secy. and gen. mgr. of Snow White Refrigerator Co., also of Cincinnati, which company failed in spring of 1927. Kennedy succeeded Gilbert L. Glover, as secretary and treasurer of Fern-Glover. Directors: Andrew Englehart and officers.

In July, 1929, Fern-Glover discontinued business and was scheduled to be sold at auction Aug. 15, 1929.

Fessler Mfg. Co.

Last known address:

1943 Broadway, Kansas City, Mo.

Incorporated June 17, 1927 (Missouri).

Officers (April, 1931): Wm. K. Fessler, pres.; Harold H. Fessler, secy.-treas.; Wm. L. Fessler, mgr. Wm. L. Fessler started business Jan. 1, 1924, as Fessler Auto Top Mfg. Co., previously being vice president of the Automobile Coach Corp.

Company entered the electric refrigeration field about 1927, manufacturing machines only, under their own patent. Machines were equipped with reciprocating compressors, belt driven, used methyl chloride as refrigerant, and had Penn or Tag pressure controls. Century and Wagner 1/4-hp. motors were used. Also used Rex cabinets.

Machines were manufactured under the trade name "Femcold." G. H. Gray was also mentioned as general sales manager of the company.

On June 28, 1932, the company filed a voluntary petition in bankruptcy.

Fowler Refrigerating Machine Corp.

931 Munsey Bldg., Baltimore, Md.

Incorporated Feb. 2, 1924 (Maryland), to manufacture a household refrigerating machine designed by Capt. Elbert Fowler.

Officers (February, 1925) were: F. B. Fowler, ch. of board & pres.; Elbert Fowler, v. p.; H. W. Schaefer, secy.-treas.

Directors: Officers, Judge H. N. Aber-

crombie, S. S. Janney, A. W. Mason, and R. S. Shriver.

According to June 22, 1927, ERN, Fleming Fowler, Elbert Fowler, and Schaefer were still maintaining the same offices.

As of Feb. 24, 1925, the company had assembled about six demonstrating machines in a local plant.

According to June 22, 1927, ERN, the company intended to manufacture electric refrigeration units for commercial cabinets, ice cream cabinets, and soda fountains. The machine was to be an air-cooled unit with a reciprocating compressor and was to use SO₂ as a refrigerant.

Frankenburg Refrigeration Co.

Belleville, Ill.

Incorporated 1928, the name later being changed to Modern Refrigeration Co. In May, 1932, the latter company was taken over by North Pole Co. and a short time later the name was changed to Belleville Refrigeration Co.

In 1929 it bought the Modern Die & Plate Press Co. of Belleville. Julius F. Sieb as president.

"Frankenburg" machine was made in four standard sizes. Machines were 1 and 2-ton NH₃ and 1/4 and 3/8 SO₂ sizes. Direct or indirect cooling was used. Reciprocating compressor.

Also see Modern Refrigeration Co.

Franklin Air Compressor Corp.

Norristown, Pa.

Established by Franklin Air Compressor Works, controlling interest being acquired 1927 by J. J. Williams and W. W. Moss. Re-organized, company changing the name to Franklin Air Compressor Corp. and in December, 1927, entire capital stock was acquired by Kulair Corp., Philadelphia, Pa., stockholders taking stock in Kulair Corp. as payment.

Kulair eventually moved from Philadelphia to Norristown, Pa. The Kulair Corp. formerly held controlling interest in Thomas H. Livezey Co. and Dunning Pump Mfg. Co., later disposing of these.

Officers, Franklin Air Compressor Corp. (June, 1929): W. W. Moss, pres.; E. D. Dunning, v. p.; H. S. Plummer, secy.; W. R. Yeakel, treas. Directors: Horace Roberts, W. W. Moss, A. P. Jackson, H. S. Plummer, E. D. Dunning, R. G. Dyson, Haseltine Smith, Emma Roberts, and M. M. Gibson.

COMMERCIAL REFRIGERATION

Wayside Milk Retailer



William Hoery, Colorado farmer, is doing a big volume of business with this Kelvinator-cooled milk-dispensing tank.

Cooling Preserves Bermuda Flowers

NEW YORK CITY—The recently opened New York branch of the Fairy Isle Flower Shop of Hamilton, Bermuda, has been equipped throughout with modern mechanical refrigeration installed by the York Ice Machinery Corp.

Main feature of the refrigerating system is a large florist's showcase, 9x9x4 ft., which is cooled by refrigerating coils of the "dry" type. A York Freon commercial refrigerating unit furnishes the necessary refrigeration.

According to Theodore O. Covell, president of the Fairy Isle Flower Co., the opening of the New York City branch marks an important step in the advancement of Bermuda's flower growing industry.

"Thousands of 'Fairy Isle' Easter lilies are shipped to America every season," states Mr. Covell. "The blooms are extremely fragile, and are highly sensitive to changes in temperature and moisture. The use of the refrigeration system, under automatic control, will permit us to duplicate as closely as possible the atmospheric and climatic conditions under which the Fairy Isle lilies are grown, and thus to bring the blooms into the New York market in a more salable condition."

Carbon Dioxide Code Changes Approved

WASHINGTON, D. C.—National Recovery Administrator Hugh S. Johnson on Aug. 18 announced his approval of amendments to the supplementary code of fair competition for the carbon dioxide division of the chemical manufacturing industry.

The amendments enable the Code Authority to prepare a budget and provide a basis of contribution to the same by members of the industry, revise the price list section, and establish a new code article to be known as "Trade Practice Provisions—Price Cutting."

Code Authority proposed that its chairman act as confidential and disinterested agent of the Code Authority, with whom members of the industry might file price lists. This, according to the statement of the Administrator in his letter to the President, "has been changed back to the Administration's more general proposal, leaving it to the Code Authority to designate a confidential and disinterested agent because the designation of a particular individual or agency in a Federal statute is not considered advisable, owing to possibility of change."

Frigidaire System Cools Beer in Wonder Bar

MIDDLETON, Wis.—A. J. Loeser, proprietor of the Wonder Bar here, has equipped his establishment with a Frigidaire "Flowing Cold" refrigeration system. Installation was made by Henry E. Hefty of the Hefty Sales Co., Madison Frigidaire distributor.

The establishment has a revolving bar seating 36 persons, and tables for several hundred more. It has an insulated pre-cooler with a capacity of 16 barrels. Two halves are on tap at all times and the others held in readiness long enough to eliminate "wildness." The beer is tapped by lines leading directly to two draft arms in the outside wall of the pre-cooler, making secondary cooling unnecessary.

Specially Built Tank Refrigerates Milk For Road Stand

DENVER—To William Hoery, owner of a dairy farm near here, a unique Kelvinator milk-cooling installation has meant a 2,000 per cent increase in sales within two months.

Needing an outlet for the milk and cream produced by his 57 cows, Mr. Hoery built a wayside stand on the edge of the city. There the raw milk was sold, principally in gallon lots. Daily sales averaged about 10 gals.

Production continued to keep well ahead of demand, and so the dairyman, after consulting Clifford Apperson and Georges Trudeau of the Public Service Co. of Colorado, decided to enlist the aid of Kelvinator electric refrigeration.

The power company's engineers designed a 100-gal. tank-like container, to the outside of which were sweat graduated coils for expansion of the refrigerant.

Covering the coils and the exterior of the tank were 4 in. of ground cork. This insulating material was itself surrounded by a second tank, and the top and bottom tightly sealed with hydrolene.

An agitator connected by a shaft to an electric motor mounted above the 2-in. cover was installed to hold at the same temperature all parts of the milk contained in the tank.

From 10 gals. a day Mr. Hoery's sales have already jumped to 20 times that amount. Not only is all his own output easily disposed of, but Mr. Hoery lately has found it necessary to buy large quantities from outside producers.

He is now drawing up plans for a 250-gal. tank to replace his present 100-gal. container.

Dairy Firm Reports on Kold-Hold Cost

LANCASTER, Pa.—Penn Dairies, Inc., of this city, which has converted a number of its trucks from ice and salt refrigeration to "Kold-Hold" refrigeration kept records during June and July last year which showed that installation of the Kold-Hold units had saved them more than \$75 per month in operating cost as compared with June and July in 1932, when the trucks were still using ice and salt.

Current consumption per day for the refrigeration unit operating the Kold-Hold units averaged 9.7 kwh. per day, which at 1½ cents per kwh. amounted to \$4.36 for June and \$4.52 for July.

Cost of icing the trucks in the previous June and July had been \$88.50 and \$80.60, thus making net savings of \$84.14 and \$76.08, respectively.

Girls' School Is Equipped With G-E Commercial

SIMSBURY, Conn.—The exclusive Ethel Walker School for Girls here has been equipped with General Electric commercial refrigeration equipment by Modern Home Utilities, Inc., Waterbury, Conn., distributor for G-E refrigeration products.

The installation included an S-67 ice maker, a 45-cu. ft. service type box equipped with four "conditioned-air" evaporators, a 1½-hp. compressor for the school's ice cream maker and hardening cabinet, and a "conditioned-air" evaporator with a 2-hp. compressor for the service-type reach-in box.

George Trainor of Modern Home Utilities, Inc., made the sale.

Cabinet by
Seeger
SAINT PAUL

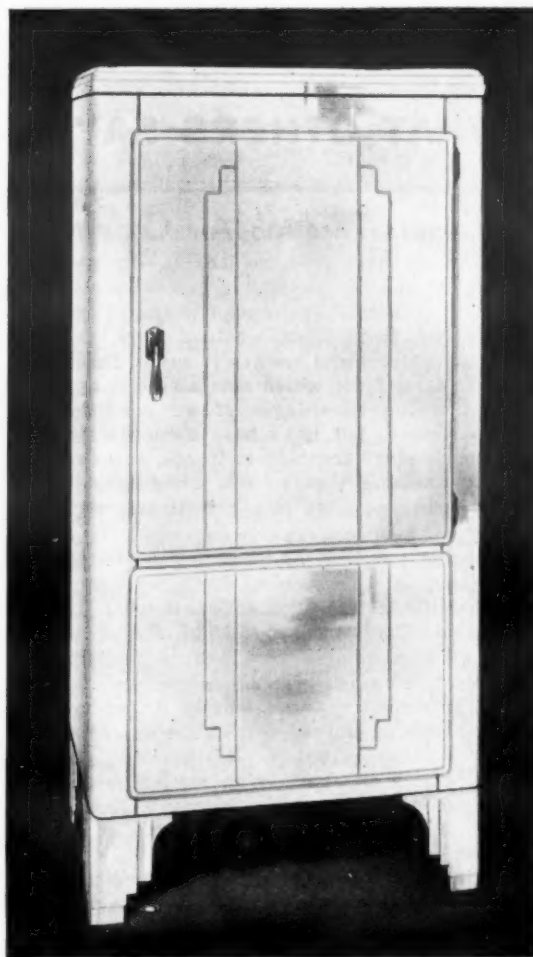


Old Style Refrigerator

For That Replacement Market

FOR OVER twenty-five years Cabinets by Seeger have dominated the highest type market throughout the world—that they have been eminently satisfactory is evidenced by the remarkably small number needing service of any kind.

As many of these families will be in a position, shortly, to replace their old, out-of-style refrigerator with something more modern and pretentious, would it not be reasonable to assume that this mass of satisfied users will again look for the name plate—



Modern Style Cabinet

Cabinet by
Seeger
SAINT PAUL

Seeger Refrigerator Company
SAINT PAUL, MINNESOTA

New York — Los Angeles — Chicago — Boston
Buffalo — Philadelphia — San Francisco

ELECTRIC REFRIGERATION NEWS

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Stockholders' Money

ANALYZING the development of the electric refrigeration industry, the president of one of the leading manufacturers once made the statement that the industry had been built at the expense of stockholders.

"Who paid the cost of pioneering in the automobile industry?" he queried, rhetorically. "Why the public, of course. Who generally pays the cost of pioneering any new product? The public. Who should pay the pioneering charge? The public—because the public gets the benefit of it. But who paid for pioneering electric refrigeration?" he perorated. "Stockholders! The number of corporations which have gone broke in this business is shameful!"

After many long days and weary nights of delving into old files, interviewing veterans of the industry, and thumbing through bound volumes of back numbers of ELECTRIC REFRIGERATION NEWS, the editorial staff of the NEWS is about ready to agree with the executive quoted above. The number of manufacturers who have entered the electric refrigeration industry with high hopes and a bagfull of stockholders' money—only to fall with a resounding crash, or leave quietly by the back door—is truly appalling. In this issue of the NEWS the names of many of these companies, their officers, descriptions of their products, and something about the history of their operations are delineated in some detail. From this record one can learn much of the early history of the industry.

If one may believe the old-timers who remember the vicissitudes of the industry since 'way back when, these early pioneers were composed of about equal parts of opportunists who saw a chance to sell stock or goods to a public which seemed to have an exceptionally favorable response to the idea of electric refrigeration, and of inventors and entrepreneurs who really had products which they believed would perform a useful and valuable service in the home, and who hoped to build permanent business institutions thereon.

Two things stand out in a study of the historical material presented in this issue of the NEWS: (1) the American public accepted the idea of household electric refrigeration early, and regarded it with increasing favor as the years went on—so much so that it bought not only electric refrigerators, but reams of stock in companies to manufacture them; and (2) once a man got into the refrigeration industry, he found it hard to tear himself loose from it. Over and over again in the record appear the same names; when one company passed out, its executives generally found berths in another concern. Many of them had such faith in the future of the industry that they were able to sell established manufacturers of other lines on the idea of getting into the electric refrigeration business. It's ironically amusing to note the parent names of many of these early manufacturers, and see from what businesses they took their plunge into the refrigeration maelstrom—everything from dumb waiters to picture frames is represented on the roll.

Any history of industrial development usually calls attention to the hardships experienced by those who dared depart from convention and

custom, those who ventured to find another way of doing something. The lot of the pioneer is almost invariably a thankless one. Seldom does the originator of a new service to humanity live to reap profits from the seeds he has sown. This seems to have been notably true in the refrigeration industry.

It should be remembered, though, that the work of the inventor is only one part of the pioneering job. The function of the promoter who stirs the imagination of investors is equally important. Few inventors have the ability to attract the capital which is ordinarily required to float a successful enterprise. Many promoters, on the other hand, don't understand the product they are offering, or realize its full significance. But that isn't necessary. They live on, and trade in, faith and inspiration. They do their part, and a necessary one—even if their methods are sometimes questionable—in the development of an industry.

Even the perfection of a working model of an invention, and the collection of money enough to launch an enterprise, are not sufficient in themselves. Competence in production processes—knowing how to produce the model economically in quantity—is an essential factor in the success of a company. Rarely is the inventor capable of directing the tooling up of a production line to turn out his product in great numbers. That takes engineering knowledge, practical experience, and skill of a highly specialized order.

Not even with the invention, the capital, and the production line is the manufacturer sure of success. He must learn how to sell the new product. That also takes a highly specialized type of brains to direct. The salesman who goes out ringing the doorbells of "cold" prospects—those who have never heard of the product and are not conscious that they need or want it—is just as truly a pioneer as the man who first conceived the idea of the product. So are those who undertake to organize and manage a distributing organization, and promote the business.

Notwithstanding all the early failures in the industry, those who are riding the crest today have reason to offer up a few thanks for the pioneers who broke through the underbrush and blazed the trail toward present profits. And while the industry is at the business of thanksgiving, it might be well to drop a bit of gratitude at the doorsteps of the army of investors who bought stock in these pioneering enterprises—and who lost, collectively, millions of dollars in the early experiments in manufacturing and selling refrigerators. Expensive though these lessons may have been, the losses of the pioneer manufacturers taught their more successful successors *what not to do*. Yesterday's losses form the foundation for today's gains.

WHAT OTHERS SAY

More Business Through Air Conditioning

BUSINESS men have been bemoaning the necessity of summer slumps for years, but have done very little about it. The principal reason for summer slumps, as everybody knows, is that hot weather saps the energies of buyers and sellers, and makes it more difficult to do business, no matter from which side a sale is approached.

Today, when the advantages of air conditioning are not only understood, but have been demonstrated in the case of moving picture theaters, railroads, and restaurants, it is literally amazing that so few companies have converted the liability of heat into a business-getting asset.

Go into the average department store on any hot summer day and you will find employees sweltering and customers tired and discouraged. Advertising cannot overcome conditions like this. Yet if the store were air conditioned, the sales people would be alert and enthusiastic, the customers cool and interested.

This is really a major problem of business, and yet it is discussed as though it were merely incidental. Everybody realizes that employees and customers could not do business in an unheated building in the middle of winter, and yet business is expected to go forward without hesitation under conditions which in many cases are far worse, from the standpoint of the bodily discomfort and loss of energy involved, than working in the cold.

The continuation of present conditions means that a large part of the advertising of manufacturers and merchants is wasted, because a prohibitive penalty is imposed on the efforts of the customer who wants to make a purchase. No matter how attractive the product, the purchaser is asked to subject himself to discomfort and inconvenience in order to see and buy it.

This year's terrific heat over most sections of the country will convince a lot of people who have been waiting for something to happen in air conditioning that they have waited long enough.—*Advertising Age*.

LETTERS

Normal Repossessions

C.I.T. Corp.
1 Park Ave., New York City
Aug. 21, 1934.

Editor:

Many thanks for sending us the clipping from your Aug. 8 issue, giving a tabulation of carrying charges on commercial refrigerator deferred payment paper.

I am sorry I could not write last week about our recent commercial refrigerator experience as you suggested. However, I am hoping it is a case of "better late than never."

We have been unaware of "waves of repossession this year," and have been conscious of only a normal experience. One of our largest accounts in the New York metropolitan territory handling commercial refrigeration has a maximum repossession experience for the past year of 1 per cent. This takes in the five boroughs of Greater New York, Westchester, nearby Connecticut, and northern New Jersey.

The secret of so enviable a repossession experience has been an unwavering insistence on sound terms; not less than 20 per cent down payment in the metropolitan territory, and the normal requirement that the purchaser represent a retail store in business more than six months, with a clean trade record and a favorable bank reputation.

It has been impressive to see the pronounced reduction in repossession experience and in collection trouble as a result of the 20 per cent down payment requirement.

Experience, generally, has been more favorable even, than in the metropolitan territory where, of course, the greater hazards are found. Elsewhere a minimum down payment of 10 per cent sometimes with good credits is perfectly safe.

If general experience were averaged for the United States, taking into consideration all kinds of markets, economic conditions, as well as the large and small community, I should estimate that 10 per cent would be a liberal estimate of possible* repossession experience in any comprehensive drive for commercial refrigeration business. If manufacturers made their commercial refrigeration drive at retail food stores with a minimum of six months' experience and adequate down payment, as outlined above, there is nothing in our experience to indicate that such a drive would not result both successfully and profitably.

We appreciate your helpfulness to us when we require anything, and I am glad to share our experience with you for what value it may be to you. Drop in and see us sometimes when you are in New York, and perhaps we can find still more to talk about.

L. Y. McANNEY.

*P.S. It must be remembered a 10 per cent total repossession experience may not mean a 10 per cent total loss. There is a large proportion of salvage in any repossession involving commercial refrigeration equipment, condensers, coils, etc. With a moderate reserve set up on all sales to guard against losses resulting from the resale of repossessions, manufacturers should feel even safer in launching a commercial refrigeration drive at retail stores.

Uniform Carrying Charges

Jefferson Ice Co.
4010 Belden Ave., Chicago
Aug. 27, 1934.

Editor:

In your edition of ELECTRIC REFRIGERATION NEWS, Aug. 8, 1934, you carry an item showing the uniform schedule of carrying charges on deferred payment sales of commercial refrigerators. Has a similar schedule been adapted on the sales of domestic refrigerators, and if so, can you advise us where to apply for it?

We take this opportunity of acknowledging receipt of your very splendid REFRIGERATION DIRECTORY AND MARKET DATA BOOK.

WALTER J. MALATESTA,
General manager.

Answer: A uniform schedule of charges on deferred payment sales of household refrigerators has not yet been promulgated.

Thank you for your opinion of the DIRECTORY.

Kelvinator Policy

Kelvinator-Bohman Co., Inc.
16 South Jonathan St.
Hagerstown, Md.
Aug. 25, 1934.

Editor:

We wish to advise that starting Sept. 1, 1934, we are changing the name of our company to be known as Bohman-Warne, Inc., instead of continuing as Kelvinator Bohman Co., Inc., as in the past.

Our reason for making this change is because the Board of Directors of the Kelvinator Sales Corp. at an annual meeting passed a resolution that the name Kelvinator in the future should not be used as the name or part of the name by any of their

distributors or dealers.

Our relations with the Kelvinator Sales Corp. are and always have been most pleasant and agreeable. While we feel that we have advertised and spent a good sum of money in popularizing the name Kelvinator-Bohman Co., Inc., we do not feel that we will suffer the loss of any business or prestige by changing the firm name. As above stated, we are glad to comply with Kelvinator's wishes in the matter.

We shall continue to represent the Kelvinator Sales Corp. in this distributing territory. There has been no other change in our organization; no new issue or transfer of stock; no change in the officers of the corporation, or its management. We expect to continue in the future as we have in the past, with no changes contemplated.

The first eight months of 1934 represent the largest volume of business over a like period of any other year since our organization. The year to date has been the most prosperous one we have enjoyed. We expect and can see no reason why our business should not continue to expand and prosper.

May we take this opportunity of expressing to your organization our sincere appreciation of your cooperation and loyalty in the past, and it is our desire that this pleasant relationship may continue for a long time to come.

GEORGE M. BOHMAN,
President.

Wile Knows His Stuff

Bronson, Minn.
August 29, 1934.

Editor:

Your Aug. 22 issue was so good that I feel you should know that it is appreciated. ELECTRIC REFRIGERATION NEWS fills a long felt want in the industry and especially among service men. Your articles on obsolete machines are of great value and when you get all through publishing them I hope you put them out in book form—if so put me on the list for a copy.

I wish principally to call attention to the article by Mr. D. D. Wile of the Detroit Lubricator Company on expansion valves in your Aug. 22 issue. I believe this is the most comprehensive article I have ever seen—it is quite evident that Mr. Wile knows his stuff from A to Z and also knows how to put it on paper in an intelligible manner.

Your articles on service will do more to keep the public sold on refrigeration than any amount of high pressure advertising as failure of any machine to function properly and inability of service men to put it in working order will soon spell ruin for the manufacturer, whereas an informed service man can soothe a good many complaints.

So, here's to you, long may you wave.

G. I. RICHARDSON,
Independent Service.

No Directory Supplement

United States Department of
Agriculture Library
Washington, D. C.

Editor:

The two copies of the REFRIGERATION DIRECTORY for which we subscribe were received April 18, 1934. We understand, however, that a supplement to the DIRECTORY was to be published the last of May. We should like to receive the Supplement and are enclosing a frank for free mailing. In case there is a charge, however, we should like to have you inform us of the price before mailing.

L. K. WILKINS,
Chief, Periodical Division.

Answer:

No supplement will be published to the 1934 Refrigeration Directory. A fall supplement to the 1932 Refrigeration Directory was published, which may have given Mr. Wilkins the idea that a supplement might be put out this year. The 1934 Refrigeration Directory and Market Data Book, however, is regarded as being sufficiently complete and up-to-date to be able to hold its place as the authoritative reference book of the industry until the 1935 Directory appears early next year.

How It's Done

Dry-Zero Laboratory
Research Testing Analysis
Refrigeration Insulation and Sound
Absorption

930 N. Halsted St., Chicago

Editor:

I've noticed the excellent photographs from your small camera which have been appearing in ELECTRIC REFRIGERATION NEWS, and am curious to know just how it is done. We'd like to do some inside-work photography over here, and would appreciate it indeed if you will tell us all about it.

J. K. CORNELL.

Answer: A Zeiss Contax camera (model B) with an f 1.5 lens, plus illimitable patience, plus a considerable expenditure of money in experimenting (nobody can teach you how to run these newfangled German cameras—you must learn by the trial-and-error method) is the formula for taking informal pictures without fuss, feathers, or benefit of special lighting equipment.

92 Frigidaire Men Attain B.T.U. Club

DAYTON — Ninety-two Frigidaire dealers and salesmen have attained their 1934 quotas ahead of time and now are members of the 1934 "B.T.U." club, according to a statement released last week by Frank R. Pierce, sales manager.

Following are the newest members: Akron district—E. R. Springston, J. E. Naugle, R. O. Parks, W. A. Treacy, B. E. Camp, F. D. Coffman. Albany district—C. H. Briggs, L. Landau.

Atlanta district—S. M. Byck, S. E. Brown, G. E. O'Neal, D. S. Block, E. H. Timmons, A. E. Westerlund. Chattanooga district—H. A. List, J. F. McKibbin, H. N. Brown, Mrs. Jeans Ford, I. N. Hamilton, C. M. Cook, R. A. Waller, T. H. Smith, Charles McMurray, D. E. D'Armond, C. B. Hoskins, C. B. Kuhn.

Denver district—Oliver Smith, E. N. Jackson, O. F. Strain.

El Paso district—O. N. Wherrett, Gordon Chumney, Jr.

Ft. Worth district—W. I. Gallup, H. S. Durrance, A. H. Leslie.

Houston district—R. B. Brown, G. L. Ross, G. L. Cook, A. M. Lambessy.

Kansas City district—Glen A. Mountford.

Miami district—G. E. McFarlane, C. E. Kirby.

New Orleans district—Irl Lunsford, Louis Glueck, J. W. Hutto, L. L. Butcher.

Oklahoma City district—J. J. Simpson, Leon Rounds, C. A. Wolverton.

Pittsburgh district—G. R. Dutton, S. A. Knoll, A. R. Sorenson, W. K. Baker, Albert Gaskill, C. W. Ramsey.

R. E. Haskell, G. W. Buzzard, E. G. Fields, Edgar Needham.

Portland district—C. S. Loughton, R. N. Haverstick, O. E. Buchholz, G. E. Dick.

Roanoke district—G. C. Cole, E. S. Greever.

San Antonio district—R. W. Rhea, H. L. Archer, Ardis Colbert, J. M. Schwartz, J. C. West, J. L. Young, Joske Bros. Co.

St. Louis district—L. R. Scott, H. C. Corcoran, O. K. Hope.

Seattle district—C. W. Derby.

Sioux City district—G. E. Hammer, Central States Electric Co., Rolfe, Iowa; Kallmer & Dinges, Power Electric Co., Armin Sales Co., George McMullen, Mobridge Refrigeration, Zenz Radio Shop, Emil Eisenbraun, Lyle Wolfe, Thayer Hardware Co.

Wichita district—G. W. Rauch, W. B. Endicott, H. W. Luker.

G-E's 'Liftop' Model Is Shown to Utility Group

CLEVELAND — Twelve representatives of the North American Co., utility holding organization, spent two days at Nela Park to inspect the new General Electric Liftop refrigerator and companion range.

Sales Manager A. M. Sweeney of the refrigeration department was chairman of the session at which talks on merchandising electric ranges, dishwashers, and the Liftop were given by J. R. Poteat, manager, range division; C. M. Snyder, manager, dishwasher division.

North American representatives attending were: W. L. Berry, S. F. L. Snyder, and J. A. Bell, Union Electric Light & Power Co., St. Louis; C. W. Hough, North American Co., New York; F. A. Coffin, F. L. Illing, and Mrs. Ellwood, Milwaukee Electric Power & Light Co., Milwaukee; H. A. Brooks, and G. P. Mangan, Potomac Electric Power Co., Washington, D. C.; H. S. Gillie, J. E. North and J. M. Gerber, Cleveland Electric Illuminating Co., Cleveland.

St. Joseph. Mo. Grille Uses G-E Display Case

ST. JOSEPH, Mo.—The Stag, new grille here, has been equipped with General Electric refrigeration by E. J. Kearby of the General Drug & Appliance Co. of this city.

The equipment consists of a D-100 display case, two 45-cu. ft. G-E cabinets and a (M-8) compressor.

Window Displays Help G-E Dealer's Sales

PITTSBURG, Kan.—Sell & Sons Mercantile Co. sold 158 G-E refrigerators in less than seven months this year.

Special attention is given to window displays, a new display being installed each week under the direction of Joe Valentine.

One of his recent displays consisted of a Monitor Top model surrounded by 140 G-E salt and pepper shakers, each one representing a refrigerator sold and each carrying a small "sold" tag with the name of the purchaser.

In addition to window displays, newspaper advertising is used consistently, and each week some kind of direct-mail material is sent to the prospect list.

Dr. Millikan Purchases All-Electric Kitchen

PASADENA, Calif.—Their interest aroused by G-E national advertising, Dr. Robert A. Millikan, Nobel prize winning scientist and head of California Institute of Technology, and Mrs. Millikan called at the Pasadena store of the George Belsey Co. to investigate the G-E kitchen. Mrs. Millikan was invited to attend one of Miss Bess Meals' presentations in the new kitchen in Belsey's Hollywood store. The demonstration, together with the salesmanship of Al Morrell sold both a range and a dishwasher.

Joliet Penitentiary Buys New Refrigerators

JOLIET, Ill.—The famed Joliet Penitentiary here recently modernized its kitchen with Westinghouse and Seeger refrigeration equipment.

Equipment installed consisted of a Seeger AL-681 hooked up to a 1-hp. Westinghouse condensing unit, an ice maker on an AS-50 ½-hp. unit, and a Westinghouse C1-63 refrigerator.

Electrical Industry Sales Near 4-Year Peak, Says Dun Survey

NEW YORK CITY—Leading electrical industries are approaching a four-year peak in unit sales volume, according to a survey of the Electrical Supply Trade recently published by Dun & Bradstreet, New York City.

The estimated sales total of all electrical appliances for 1933 was 739,000,000, marking the best year since 1929. According to present indications, the total for 1934 will reach 800,000,000, the report states. Future business conditions are considered to be encouraging in view of the general increase in purchasing power which is expected to permit a larger sales volume in specialties.

Operations in leading production centers are running better than 50 per cent ahead of those for the first six months of 1933, billings have shown a corresponding increase, and employment is 20 to 40 per cent higher. Sales in nearly all electrical lines have followed a consistent upward curve since the first of the year, sales being maintained above those of a year ago even in those states which have suffered severe devastation from the drought.

The household appliance division of the electrical supply industry has been greatly responsible for the gain shown, as the use of all types of electrical appliances is on the increase and long-deferred replacements are being made.

Electric refrigerators, washing machines, ironers, labor-saving devices for the kitchen, table cookers, toasters, and lamps have shown the greatest increase. A comparison with the first six months of 1933 reveals advances of more than 200 per cent in some items, while a number of divisions show doubled production.

During the early months of the year, prices showed some fluctuation, but at present seem fairly steady at a level 10 to 20 per cent higher than last year.

Retail Code Revisions Ban Combination Sales

(Concluded from Page 1, Column 1) to apply to the use of bona fide premiums.

Following is the added section regarding the use of a lottery or similar element of chance:

"No retailer shall sell or offer for sale any merchandise upon a condition which involves a lottery, gamble, or element of chance, similar to what is commonly known as a 'suit club plan'; provided, however, that this sub-section shall not apply to non-profit organizations not definitely constituted to carry on retail trade."

Another of the approved amendments provides for the temporary reduction of store hours for a period not to exceed three "consecutive" months. Before amendment, such reduction would have had to be made during the summer months.

A change in the labor provisions is the fixing of the allowable hours of work for a watchman at 56 in any one week, and not more than 13 days in any 14-day period.

That provision of the code regarding the limitation upon the number of persons working unrestricted hours was corrected, so that the total number of persons who will be permitted to work unrestricted hours shall not exceed a ratio to be computed on the average number of employees during the preceding 12 months.

Grocer Modernizes Store -- Wins Display Prize

CROOKSTON, Minn.—The L. B. Hartz Stores, Inc., of this city, which only recently installed new display case equipment, has won first prize in a meat display contest conducted by the *Grocers Commercial Bulletin*.

Equipment installed consists of Hussmann-Ligonier humidi-coiled display cases operating in conjunction with Kelvinator commercial refrigeration, installed by the Crookston Electric Co., local Kelvinator dealer.

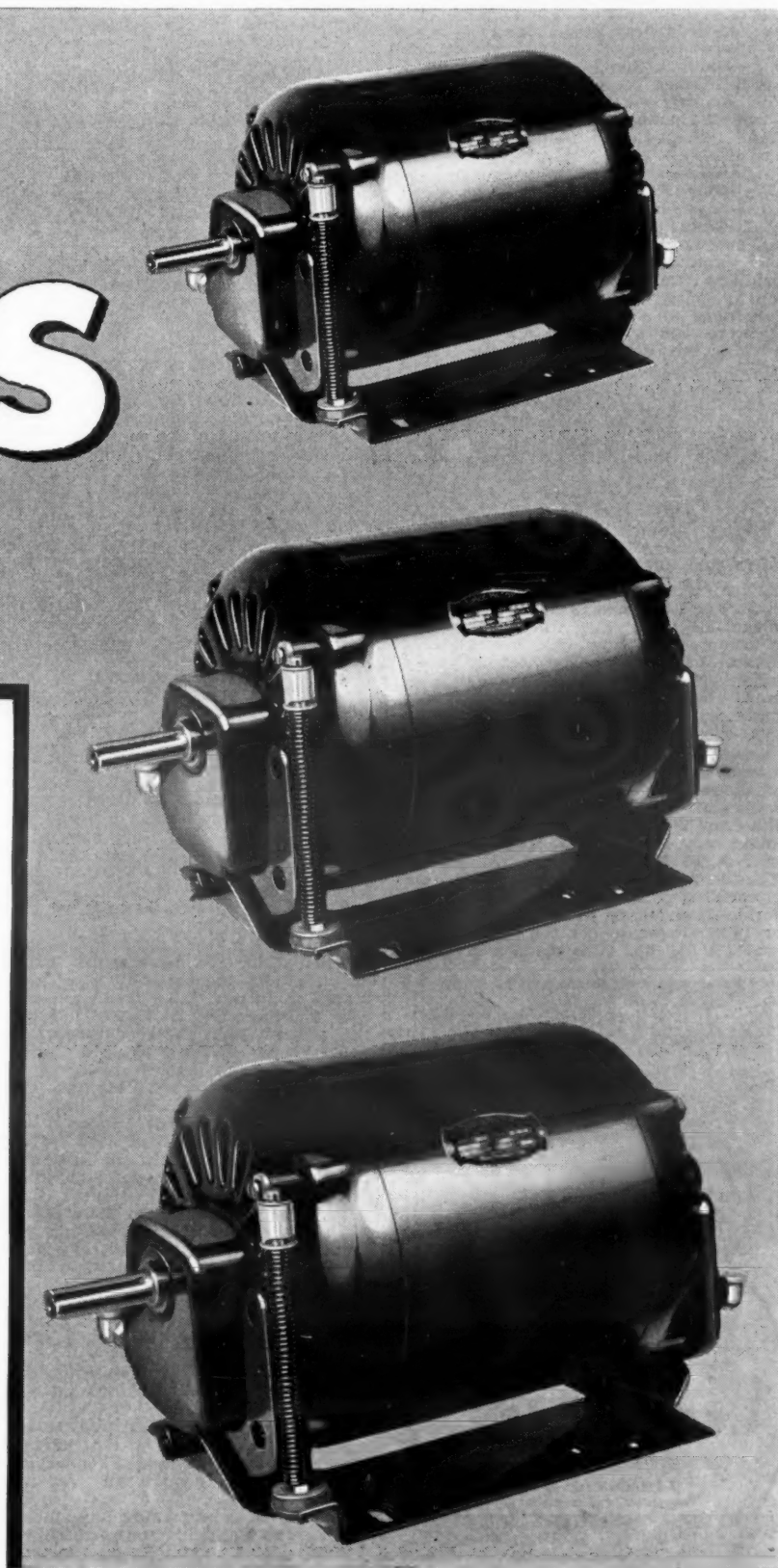
DELCO MOTORS

NOW... A COMPLETE LINE OF QUIET MOTORS for AIR CONDITIONING!

To meet the requirements for quiet and dependable motors for air conditioning equipment, Delco has developed a complete line of repulsion-induction and polyphase motors, from one-third horsepower up to three horsepower.

These motors are quiet for four reasons: (1) magnetic hum has been reduced to the minimum; (2) end-play noise is absent, due to cork end-play cushions on each end of the armature; (3) vibration and other natural "running" noises have been effectively isolated from the base by the use of a special vulcanized rubber cradle mounting; and (4) an automatic belt tightener keeps proper tension on the belt without continual adjustment, and reduces belt noise. In addition, sealed lubrication insures long life to the bearings, since the proper grade and amount of oil is added when the motors are shipped from the factory.

Delco dependability is too well known and too well appreciated by manufacturers, dealers and consumers to require special comment. Those who are now designing air conditioning equipment requiring motors with good starting, accelerating and running characteristics, as well as low temperature rise, should carefully consider the features built into these special new Delco motors. Available also are high quality, quiet motors in ½ or ¾ h.p. for the circulating fans in air conditioners.



DELCO PRODUCTS CORPORATION, DAYTON, OHIO

CORPORATE HISTORY—Continued

(Continued from Page 8, Column 5)

Manufactured household electric refrigerators.

Officers (1918) were: F. F. Phillips, v. p.; R. M. Lloyd, secy.-treas. Lloyd was a contracting engineer by profession, holding positions with various concerns throughout New York City, and was for a time electrical engineer for the Electrical Storage Battery Co. of Philadelphia, Pa. Ulman was said to have withdrawn early in 1918 and no successor was appointed.

Corporation was succeeded by the Balsa Refrigerator Corp. of 50 East 42nd St., New York, in 1918. It was said that the Frigid Corp. had been out of business for about two years at the above-mentioned address. The Balsa Refrigerator Corp. later reported moved to Long Island City, N. Y.

Frigidzone Mfg. Co., Inc.

Last known address:

2809 Third Ave., Seattle, Wash.
Incorporated Nov. 28, 1929, (Washington). Taking over business started as a partnership September, 1925 as Frigidzone Mfg. Co. (not inc.).

Business first conducted at 116 Elliott Ave. Moved in April, 1929 to above address.

Officers and directors (1930): T. J. Swanson, pres.; Earl H. Mandel, secy.-treas.; Swanson had been branch manager in Portland, Ore., for Artwell Mfg. Co., in the furnace line. Mandel was also connected with the Artwell Co.

It was stated in April, 1929 that they had \$300,000 worth of advance orders booked to be filled as soon as the refrigerators could be built. The machines had reciprocating compressors, belt drive, both pressure and temperature control, were SO₂ models, and used Wagner and Century motors, according to Dec. 18, 1929 ERN. Trade name: "Frigidzone."

Frig-O-Matic, Ltd.

Last known address:

137 Nelson St., Brantford, Ont., Canada.

Incorporated Nov. 7, 1929, (Dominion laws). Formed to acquire business formerly owned and operated by Dominion Blower Co., Ltd., which in turn was a succession to a partnership composed of A. W. Spowage and John Palmer, which had been known as the Dominion Blower Co.

Frig-O-Matic, Ltd., became active about Jan. 1, 1930, originally operating on Morrow St. in part of the Robbins & Meyers, Ltd., plant, and moving to the above address later in 1930.

Officers (1931) were: Arthur E. Spowage, pres.; J. Sedgwick, v. p.; John Palmer, secy.-treas. Spowage was president of Savage Blowers, Ltd., until Sept. 16, 1926 when he formed the Dominion Blower Co. The company manufactured blowers for use with furnaces known as Coal-O-Matic and also electric refrigerators known as Frig-O-Matic.

Frig-O-Matic compressors were one and two-cylinder machines using SO₂ in a flooded system. Condensers were air cooled. Wagner and Century motors were used, and Ranco or Mercoid controls. The products were sold through its subsidiary Coal-O-Matic, Ltd., a selling company only.

According to a report of Sept. 1, 1931, they were said to be offering to pay 15 cents on the dollar, moving the office to 557 Yonge St., Toronto, about this time. In September, 1932 company was declared to be in process of liquidation.

Stock and trade of company was taken over by the bank and plant and equipment were sold to Gilson Mfg. Co., Guelph, Ont.

Frigor Refrigerator Co.

Chicago, Ill.

Frostic—See Earnshaw Mfg. Corp.

Frostmaker Refrigerator Co.

Chicago, Ill.

A compression type machine radically different in design. The "Frostmaker" compressor had neither piston nor valve. Instead the gas—either SO₂ or NH₃—was compressed by two rotating meshing gears. (Sept. 12, 1928, ERN.)

Frozone Corp.

Last known address:

709 Chestnut St., Philadelphia, Pa.
Officers: W. J. Johnson, pres.; T. J. Hunter, secy.-treas.; W. J. Maginnis, chief engr.; J. F. Manley, sales mgr.

The "Frozone" machine had belt-driven, reciprocating compressor, and used methyl chloride. Condenser was air-cooled radiator type. Pressure control. Motor sizes were 1/2 to 1/4 hp. Also made a self-con-

tained show case which had the machine installed in the base.

General Refrigerating & Mfg. Co.

411 Kraemer Bldg., Portland, Ore.

Plant at Gresham, Ore.
Incorporated (Oregon) Sept. 3, 1927, with the object of manufacturing and selling refrigerating machines.

Officers and directors (April, 1929): F. W. Reverman, pres. & mgr.; F. J. Pierard, v. p.; P. J. Gallagher, secy.; B. L. Westcott, treas. Reverman lived in Portland for some years operating in real estate. He purchased a patent of a refrigerating machine which he turned over to the General Refrigerating & Mfg. Co., taking a controlling interest in common stock in payment.

Plant purchased at Gresham, Ore., from Beaver State Motor Co. During 1928, an effort was made to manufacture refrigerating machines without much success.

The firm made the "King Boreas" and "Keep Cool" units, the former being a SO₂ machine.

An involuntary petition in bankruptcy was filed against General Refrigerating & Mfg. Corp. on April 3, 1929, by the Credit Service Co., Consolidated Supply Co., and W. P. Fuller Co. Application was made for receiver, and C. A. Coombs was appointed in that capacity.

General Utilities Co., Inc.

General Utilities Bldg., Bangor, Me.

Incorporated July 8, 1922 (Maine).

Officers (1931): H. C. Buzzell, pres. (Bellevue, Me.); John D. Whittington, treas.; Frank Fellows, secy.; Ralph Wharf, gen. mgr.

Company distributed household specialties, handling electric refrigerators and washing machines. It also had a patented electric plate for cooking and was organized to manufacture and sell household utensils.

The machine had a reciprocating compressor, was belt-driven, used methyl chloride as refrigerant, and had temperature control. Wagner and Century motors were used. (ERN Dec. 18, 1929.)

On Sept. 21, 1931, stockholders' committee was appointed to bring company affairs into more satisfactory shape. Committee members: Charles Murray (Bangor, Me.), Arthur A. Crafts (Greenville Junction, Me.), and Buzzell. These being appointed by the stockholders. Ralph Wharf was no longer general manager.

Mortgage given by General Utilities Co., Inc., to Merrill Trust Co. of Bangor, was filed for foreclosure Dec. 10, 1932.

German-American Ice Machine Co.

c/o German American Inventors & Industries Society,

55 W. 42nd St., New York City.

"Germania" Refrigerator Co.

Bellevue, Ill.

The "Germania" was a small household ammonia machine of the absorption type. (Sept. 12, 1928, ERN.)

A. O. Girard Co.

Milwaukee, Wis.

A small compression system machine for household use which was invented by A. O. Girard of Milwaukee. (Sept. 12, 1928, ERN.)

Goosmann Refrigeration Co.

Last known address:

1225 Glenlake Ave., Chicago, Ill.

A compression machine invented by J. C. Goosmann. Used CO₂ as refrigerant and had automatic control in both evaporator and condenser. Goosmann was author of the "Carbonic Acid Industry" published by Nickerson & Collins Co. of Chicago. (Sept. 12, 1928, ERN.)

Grigsby-Grunow Co.

5801 Dickens Ave., Chicago, Ill.

Organized Nov. 16, 1921 (Illinois), as Grigsby-Grunow Hinds Co., name being changed to Grigsby-Grunow Co. March 19, 1928.

Original capitalization was 100,000 shares of no par value stock, this being increased to 500,000 shares on Oct. 5, 1928, at which time a four-for-one split was made. Aug. 14, 1929, capitalization was increased to 2,000,000 shares and the stock was again split four-for-one. On Feb. 20, 1930, the amount was increased to 3,000,000 shares of no par value.

On April 5, 1930, the principals of Grigsby-Grunow Co. organized, under Illinois laws, the Majestic Household Utilities Corp., to manufacture electric refrigerators. Investment in this company was carried at \$13,125,000.

By the time the necessary plant and equipment for the manufacture had been acquired and the company was ready to start production, the fixed assets had cost approximately \$8,000,000 and operating expenses had absorbed the remaining net working capital.

Meanwhile, Grigsby-Grunow Co., as a result of its advances to Majestic Household Utilities Corp., and of the purchase of a plant from General Motors Co. for more than \$2,000,000, and other plant expansion in new construction, together with operating losses, was in a weakened working position.

The two companies were merged April 1, 1931, to eliminate inter-company indebtedness. At this same time, certain creditors of the Majestic Household Utilities Corp. accepted First-Mortgage Bonds of the Grigsby-Grunow Co. in place of open account, and about \$450,000, loaned by officials of Grigsby-Grunow Co. to Majestic Household Utilities Corp. was also paid in bonds. Further, distributors subscribed for between \$300,000 and \$400,000 worth of bonds.

On Dec. 17, 1931, Grigsby-Grunow acquired practically all of the outstanding shares in the Columbia Phonograph Co. of New York, through an exchange of stock.

Grigsby-Grunow manufactured under its trade mark Majestic, electric refrigerators, radio radios, automobile radios, and radio tubes, the parts of its products being largely manufactured at the company's several plants in Chicago.

Principal machine in the Majestic line was a four-vane rotary hermetic designed by Carl Lipman, and built by Grigsby-Grunow on a royalty basis. This used sulphur dioxide in a high-side float system. The compressor has a unique oiling

system, an electrical unloader, and other interesting features.

A conventional "open" type compressor was also sold by Majestic distributors in 1932. This was also rotary, using sulphur dioxide, Cutler-Hammer controls, and a low-side float. Unlike the hermetic models, this line of refrigerators had the condensing unit mounted in the bottom of the cabinet.

The products were sold to between 50 and 60 distributors, who in turn sold to about 10,000 established authorized dealers in all parts of the United States. The main plant was located at 5801 Dickens Ave., and branch plants were located at 4336 Armitage Ave., and 2038 N. Kalmar Ave., Chicago. Sales offices were maintained in New York City and Oakland, Calif.

Officers in 1933: E. J. Grigsby, chairman of the board and pres.; Le Roi J. Williams, exec. v. p. & gen. mgr.; H. E. Kranz, v. p. in chg. of engr.; M. D. Harrison, secy.-treas.

Board of directors: B. J. Grigsby, chairman; J. R. Cardwell; A. F. Mecklenburger; Sheldon Clark; C. L. Schmidt; N. C. Mather; and Le Roi J. Williams.

B. J. Grigsby had formerly been managing director of the Benjamin Electric Ltd., of London, and later became vice president of the Anderson Electric & Equipment Co., Chicago.

Williams was elected executive vice president and general manager March 15, 1933, succeeding Don M. Compton, who resigned March 10, 1933. He had formerly been director of patents and legal counsel since 1929.

Kranz had been an electrical engineer with Briggs & Stratton Co. of Milwaukee, and later development engineer of the Western Electric Co., entering the employ of Grigsby-Grunow Co. as vice president in 1926.

Harrison succeeded Ralph R. Trimarco during 1932, having previously been treasurer of Houdaille-Hershey Co.

On Nov. 24, 1933, Le Roi J. Williams and Thomas L. Marshall were appointed temporary receivers. The hearing was set for Dec. 5, 1933.

On Feb. 20, 1934, Judge Barnes appointed Frank McKee receiver of bankruptcy for the company.

According to the latest reports (Aug. 17, 1934), the company is not expected to reorganize and the process of liquidation is proceeding slowly. The latest negotiations for reorganization are understood to have broken down late in July. The company at this time was operating under a court order for the manufacture of parts for servicing existing refrigerators already in operation. It was brought out at the receiver's sale that 109,000 Majestic refrigerators are in use.

Grinnell Washing Machine Corp.

Grinnell, Iowa.

Business established in 1910, but was not successful. American Bonding Co., which held \$90,000 bonds secured by mortgage on plant, foreclosed. Present officers bid in property of corporation and formed present one under Iowa laws. Corporate status changed 1929 (Delaware).

Officers (1934): Charles G. Adsit, pres.; L. N. Merritt, v. p. & mgr.; Charles M. Heber, secy. Directors: Officers, Edwin Landsberg, and W. J. Cummings.

Adsit was with engineering department of Georgia Power Co., later becoming vice president. Cummings, Chicago resident, is chairman of board of directors of Continental Illinois Bank & Trust Co. of Chicago.

The company manufactures a line of moderately priced washing machines, sold principally through large department stores.

Grinnell machines were reciprocating, installed above the food compartment. They used SO₂ in a tubular evaporator with an expansion valve. Cutler-Hammer controls were used.

During the past few years, it manufactured electric refrigerators on a limited scale, but discontinued the line because it was not profitable.

Refrigerators were sold through distributors and direct to retail hardware, furniture, electrical, and department stores. Parts may be obtained from the company.

During the past few months they have done some experimental work on oil burners. Name of company has been changed to Grinnell Electrical Mfg. Co.

Hall Borchert Mfg. Co. of Pa., Inc.

Last known address:

359 Brook St., Scranton, Pa.

Chartered May 13, 1921 (Pennsylvania). Corporate name was Hall Borchert Dress Form Co., changed later to above. It is said to be reorganization of company formerly known as Hall Borchert Mfg. Co., chartered Nov. 1, 1899 (New Jersey).

Officers (1931): John C. Jankus, pres. & gen. mgr.; Mrs. Mary Brooks, Picken, secy.; W. J. Brooks, treas. Directors: Officers and Mrs. E. M. Brooks.

Hart Electric Ice—See W. B. Wilde.

Hartford Engineering & Machine Co.

Last known address: Aberdeen, Md.

Chartered Nov. 8, 1925 (Maryland).

Officers (1931): H. H. Nesbitt, pres. & mgr.; Wm. Schatz, v. p.; Wm. J. Atwood, secy.-treas. Nesbitt was formerly president and general manager of the Ever Kold Mfg. Co., refrigerator manufacturer in Baltimore, Md. He established that business in early part of 1924 and it continued until the latter part of 1928.

O. D. Nesbitt was for a time listed as vice president and M. C. Cook, as secretary of the Hartford Engineering & Machine Co., but were replaced by the above officers.

Both Schatz and Atwood were interested in the Rotax Co., Inc., 380 E. 133rd St., New York, and it is understood that Hartford owned 60 per cent of stock of Hartford Engineering & Machine Co. Neither company has been operated for some time.

Everkold machines were built in 1/2 and 3/4-hp. sizes, used SO₂ in a flooded system. Compressors were single-cylinder, reciprocating.

Holbrook, Merrill & Stetson, Inc.

Present address:

973 Mission St., San Francisco, Calif.

Incorporated March 11, 1932, (California) having purchased commercial assets of Holbrook, Merrill & Stetson, Inc., Ltd., which succeeded to a business started in 1882. Original business was gradually liquidated and is no longer engaged in active business.

History of this company is rather confusing due to the formation and liquidation of several companies of the same name.

Officers and directors (1934): Charles H. Merrill, pres.; Joseph E. Shnell, v. p. and mgr.; Wm. D. Ball, secy.-treas.

Early in 1934 Merrill and J. D. Hubbard were reported to be forming a new corporation named Merrill, Hubbard Co., to purchase the assets of the business of the old firm Holbrook, Merrill & Stetson, Inc., Ltd. He and J. E. Shnell were appointed assignees for the benefit of the creditors, Feb. 1934, of Merrill Harper, Inc.

Merrill, Harper, Inc. had been purchasing the sheet metal department of the old Holbrook, Merrill & Stetson, Inc., Ltd.

Present firm confining its activities to liquidation of merchandise of predecessor corporation in 1934, also conducting experimental work and research in refrigeration equipment. Also wholesales automatic washing machines and vacuum cleaners. Main office and display rooms are maintained at the San Francisco address, with a branch office at 1505 West 7th St., Los Angeles. The refrigeration sale is largely to apartment houses, retail markets and restaurants.

Holbrook Mfg. Co., Inc.

Last known address:

6917 S. McKinley Ave., Los Angeles, Calif.

Officers and directors (Aug. 9, 1932): L. W. Ward, pres.; Walter M. Fagan, v. p.; B. R. Matthews, secy.-treas.

L. W. Ward was also vice president of Holbrook, Merrill & Stetson Co., was formerly with Chevrolet Motor Car Co. and was sales manager of Norge Corp.

Company manufactured electric refrigerators, sold to dealers and distributors of Holbrook, Merrill & Stetson, on west coast extending as far east as Mississippi Valley.

Holbrook machines were reciprocating, using sulphur dioxide in either dry or flooded systems. Dry systems had Detroit Lubricator expansion valves. Wagner and Century motors were used, in sizes from 1/2 to 2 hp.

Voluntary petition in bankruptcy filed July 18, 1932, and H. F. Langham was appointed receiver in equity.

Company formerly owned by Holbrook, Merrill & Stetson Co., which had headquarters in San Francisco, and maintained branch in Los Angeles with L. W. Ward as vice president in charge. Holbrook Mfg. Co. was sold to Ward in 1929, and since then, he has held control.

Assets of Holbrook Mfg. Co., Inc., were sold Aug. 22, 1932 at a bankruptcy sale.

Holmes Products, Inc.

Last known address:

122 E. 42nd St., New York, N. Y.

Organized April 21, 1928 (Delaware).

Officers (1929): Julius Fleischmann Holmes, pres.; Hamilton Leroy Shields, secy.-treas.; Russell V. Downing, asst. treas. Directors: Holmes, Shields, Mrs. Betty Fleischmann Holmes, Lester F. Abberly, and Joseph Ewing.

Holmes was formerly president of Domestic Electric Refrigerator Corp., 305 E. 42nd St., New York City, which was organized July 28, 1926 (Delaware).

Entire company sold its principal interest to Julius Fleischmann Holmes in July, 1928.

In August, 1929, Holmes' refrigeration machines were too costly and proved unprofitable. The company retrenched, curtailing production and asking for cooperation of creditors having contracts for parts on the old machines. The purpose was to cancel orders not required in the new or more moderate priced line, which was to be ready in September, 1929.

Satisfactory adjustment was made, with financial assistance of Holmes as an individual. Holmes was a nephew of Max Fleischmann, chairman of the board of the Fleischmann Yeast Co.

The company moved its headquarters from 305 E. 42nd St., to 122 E. 42nd St., New York City, and discontinued its showroom at the former address.

The company filed a certificate of dissolution in December, 1929. Patents were returned to their owner: Westinghouse Electric & Mfg. Co., according to the company's attorney, Abberly Byrd and Appleton, 42 Broadway, New York City.

The Holmes machine used a direct-connected two-stage rotary compressor, with 1.9 lbs. of ethyl chloride in a low-side float system.

Houston Icelectric Co.

Last known address:

1 Commercial Bank Bldg., Houston, Tex.

This was a company name used by Capt. Jay Cashman in handling refrigeration equipment. The unit was said to be a methyl chloride machine with belt-driven reciprocating compressor. Had pressure and temperature control. Used G-E and Wagner motors.

Cashman was also reported to have been a manufacturers agent. In 1934 he was reported out of the refrigeration business and running a filling station and tourist camp near Houston, Tex.

Hvid Ice Machine Corp.

Last known address: 38 South Dearborn

St., Chicago, Ill. Factory: 711 Fulton St.

Incorporated June 1, 1927 (Illinois).

Officers (1927): Lawrence E. Abt, pres. & treas.; Robert M. Hvid, v. p.; Jay Kraus, secy. Directors: Officers, E. J. Block, Allen M. Loeb, and Walter Baer.

Hvid was also president of R. M. Hvid Co., patent holding company operating at above address.

Hvid Ice Machine Corp. was organized

to deal in refrigerating machinery and ice making machines, having its product manufactured by others on contract.

Machine used was designed by H. M. Hvid. It had a reciprocating compressor, was direct-driven, used methyl chloride, and had a temperature control. (Nov. 7, 1928, ERN.)

Factory was destroyed by fire about

Feb. 1, 1929. On June 5, 1929, the corporation was dissolved, not resuming after the fire. Reported to have paid all indebtedness.

Hydro Refrigerator Co., Inc.

115 Broadway, New York, N. Y.

Offered through dealers and distributors about 1924 was a refrigerating machine using city water pressure as a source of energy for driving the compressor. It was known as the Fedco machine, being a product of the Federated Engineers Development Corp. in which the late Chas. F. Steinmetz was associated.

The Hydro machine used ethyl chloride as refrigerant, and the same water which powered the compressor also cooled the condenser. Temperature in the refrigerator was controlled by regulating the water pressure. The unit was intended for installation in existing ice boxes.

Ice-A-Teria, Ltd.

Last known address:

27 King William St., Hamilton, Ont., Canada.

Incorporated Oct. 25, 1927, (Dominion laws). Incorporators were: Harry O. Braden, Willis Lagarie, Chas. Bates, and others. Provisional directors: N. W. Byren, E. G. Dixon, E. V. P. Shaver, Samuel Banks Nelson and W. H. Montague, all of Hamilton.

Ice-A-Teria Co., secured premises at Bronte, Ont., but location was out of the way and plant and equipment were later moved to above address. A portion of the stock has been sold at Bronte to J. S. Summerset, who became secy.

Organized to manufacture an electric refrigerator patented by Wm. Jacks of Hamilton, Ont.

Sheriff sale was advertised for March 2, 1929 under County Court execution. However, Feb. 23, 1929, a judge's order was granted setting aside sale and judgment and allowing the defendant to enter an appearance.

Another sale was advertised for Sept. 31, the landlord being claimant. The sale was then postponed and the company entered action against landlord for wrongful seizure. When last reported, Sept. 4, 1929, the action was being contested.

Ice-Maid—see Lamson Co., Inc.

Ice-O-Lator—see National Refrigerating Co.

Iceaire Corp.

112 East Main St., Durand, Mich.

Incorporated March 28, 1928 (Michigan). Organized to manufacture ice machines and refrigerator products, operations originally taking place at Detroit, Mich., and being moved to Durand about October, 1929.

Officers (1931): A. G. Roussin, pres.; Dr. E. J. Carney, v. p.; M. E. Dean, treas.; James Steward, secy. Floyd A. Coon had been majority stockholder, president and treasurer of company and had sold his stock to Roussin. Steward succeeded G. A. Goag as secretary.

Company had discontinued operations during 1933 as a result of a chattel mortgage foreclosure by A. G. Roussin, who had been largest stockholder.

Iceberg—See Berg Mfg. Co.

Text of Approved NRA Code for Electrical Wholesalers

Supplementary Code of Fair Competition for the Electrical Wholesale Trade (A Division of the Wholesaling or Distributing Trade)

Article I—Purposes

To effectuate the policies of Title I of the National Industrial Recovery Act, this Supplemental Code is established as a Code of Fair Competition for the Electrical Wholesale Trade, pursuant to Article VI, Section 1 (c) of the General Code of Fair Competition for the Wholesaling or Distributing Trade, approved by the President of the United States on Jan. 12, 1934.

Article II—Definitions

(SUPPLEMENTING ARTICLE II OF GENERAL CODE)

SECTION 1. For the purposes of this Supplemental Code, a "wholesaler" or "distributor" or "member of the Trade" is defined to mean any individual, partnership, association, corporation, or other form of enterprise, or any division thereof, which renders a general distribution service and which purchases and maintains at his or its place of business a stock of electrical apparatus, appliances, materials and/or supplies sold for use in connection therewith (except radio apparatus and supplies), or which acts as a middleman or broker buying electrical apparatus, appliances, materials and/or supplies sold for use in connection therewith (except radio apparatus and supplies) but which does not necessarily maintain a stock of such merchandise, and which through salesmen, advertising, and/or sales-promotion devices, sells to retailers and/or to institutional, commercial, and/or industrial users, and/or to any other buyers except ultimate consumers as defined in the General Code.

SECTION 2. The term "Trade" as used herein is defined to be the business in which wholesalers or distributors as above defined engage.

SECTION 3. The term "consignment" as used herein is defined to mean the delivery by a member of the Trade to any person, as agent, purchaser or otherwise under any agreement or understanding expressed or implied pursuant to which the receiver of the merchandise may at his option return any of such merchandise or claim any credits with respect thereto.

SECTION 4. The term "Divisional Code Authority," as used herein, shall mean the Divisional Code Authority for the Electrical Wholesale Trade, a division of the Wholesaling or Distributing Trade.

Article III—Administration

(SUPPLEMENTING ARTICLE VI, OF GENERAL CODE)

SECTION 1. (a) The Divisional Code Authority shall consist of eleven (11) members (from among the Trade or representatives thereof,) eight (8) to be nominated by the Executive Committee of the National Electrical Wholesalers Association and elected by members of the Trade who are also members of the Association in accordance with a method to be approved by the Administrator, and three (3) to be chosen by those members of the Trade who are not members of such Association, by a method to be approved by the Administrator. No member of the Trade shall have more than one member on the Divisional Code Authority.

(b) Only those members of the Trade shall be allowed to vote in the election of members of the Divisional Code Authority who sign or shall have signed a statement of assent and compliance to this Supplemental Code and the General Code.

(c) The terms of office of members of the Divisional Code Authority and the method of electing their successors, whether for full new terms or for unexpired terms shall be established in the By-laws of the Divisional Code Authority, subject to the approval of the Administrator.

SECTION 2. The Divisional Code Authority shall have the following duties and powers in addition to those prescribed in the General Code.

(a) To appoint a Trade Practice Committee, which shall meet with the Trade Practice Committees appointed under such Codes as may be related to the Trade, except other Supplemental Codes to the General Code, for the purpose of formulating Fair Trade Practices to govern the relationships between production and distribution employers under this Supplemental Code and under such others, to the end that such Fair Trade Practices may be proposed to the Administrator as an amendment to this Supplemental Code and such other Codes.

(b) To appoint in each Electrical Wholesale District, as determined by the Divisional Code Authority subject to the approval of the Administrator, a Code Commission to assist the Divisional Code Authority in administering this Supplemental Code; provided, however, that nothing herein shall relieve the Divisional Code Authority of its responsibilities as such.

(c) To organize, elect officers, hire

necessary employees and perform such other acts as may be necessary for the proper administration of this Supplemental Code.

(d) To adopt by-laws, rules and regulations for its procedure.

(e) To use such trade associations and other agencies as it deems proper for the carrying out of any of its activities provided for herein; provided, however, that nothing herein shall relieve the Divisional Code Authority of its duties and responsibilities under this Supplemental Code, and that such trade associations and agencies shall at all times be subject to and comply with the provisions hereof.

(f) To obtain from members of the Trade such information and reports as are required for the administration of this Supplemental Code. In addition to information required to be submitted to the General Code Authority and to the Divisional Code Authority, members of the Trade subject to this Supplemental Code shall furnish such statistical information as the Administrator may deem necessary for the purposes recited in Section 3 (a) of the Act to such federal and state agencies as he may designate; provided that nothing in this Supplemental Code shall relieve any member of the Trade of any existing obligation to furnish reports to any government agency. No individual report shall be disclosed to any other member of the Trade or any other party except to such other government agencies as may be directed by the Administrator.

SECTION 3. Nothing contained in this Supplemental Code shall constitute the members of the Divisional Code Authority partners for any purpose nor shall any member or members of the Divisional Code Authority be liable in any manner to anyone for any act of any other member, officer, agent, or employee of the Divisional Code Authority. Nor shall any member of the Divisional Code Authority, be liable to anyone for any action or exercising reasonable diligence in the conduct of his duties hereunder, be liable to anyone for any action or omission to act under this Supplemental Code, except for his own wilful malfeasance or nonfeasance.

SECTION 4. If the Administrator shall determine that any action of the Divisional Code Authority or any agency thereof, may be unfair or unjust or contrary to the public interest, the Administrator may require that such action be suspended to afford an opportunity for investigation of the merits of such action and for further consideration by such Divisional Code Authority or agency, pending final action, which shall not be effective unless the Administrator approves or unless he shall fail to disapprove after thirty days' notice to him of intention to proceed with such action in its original or modified form.

SECTION 5. It being found necessary, in order to support the administration of this Supplemental Code and to maintain the standards of fair competition established by this Supplemental Code and to effectuate the policy of the Act, the Divisional Code Authority is authorized, subject to the approval of the Administrator:

(a) To incur such reasonable obligations as are necessary and proper for the foregoing purposes and to meet such obligations out of funds which may be raised as hereinafter provided and which shall be held in trust for the purposes of this Supplemental Code;

(b) To submit to the Administrator for his approval, subject to such notice and opportunity to be heard as he may deem necessary: (1) an itemized budget for its estimated expenses for the foregoing purposes, and (2) an equitable basis upon which the funds necessary to support such budget shall be contributed by members of the Trade;

(c) After such budget and basis of contribution have been approved by the Administrator, to determine and secure equitable contribution as above set forth by all such members of the Trade, and to that end, if necessary, to institute legal proceedings therefor in its own name.

(d) Each member of the Trade shall pay his or its equitable contribution to the expenses of the maintenance of the Code Authority, determined as hereinabove provided, and subject to rules and regulations pertaining thereto issued by the Administrator. Only members of the Trade complying with the code and contributing to the expenses of its administration as hereinabove provided, unless duly exempted from making such contribution, shall be entitled to participate in the selection of members of the Code Authority or to receive the benefits of any of its voluntary activities or to make use of any emblem or insignia of the National Recovery Administration.

(e) The Divisional Code Authority shall neither incur nor pay any obligation in excess of the amount thereof as estimated in its approved budget, except upon approval of the Administrator; and no subsequent budget shall contain any deficiency

item for expenditures in excess of prior budget estimates except those which the Administrator shall have so approved.

Article IV—Trade Practices (SUPPLEMENTING ARTICLE VII OF THE GENERAL CODE)

SECTION 1. It shall be an unfair trade practice for any member of the Trade to quote a lump sum price unless such quotation shows the price of each item and unless the total equals the sum of all the items.

SECTION 2. Quantity discounts shall be computed on the basis of the quantities shipped and/or billed to a single buyer at one time; provided, however, that when a wholesaler's stock of an item is not sufficient to make a complete shipment a second shipment may be made from the wholesaler's or a manufacturer's stock, and the quantity discounts computed on the basis of the original order.

SECTION 3. It shall be an unfair trade practice for any member of the Trade to deliver merchandise to any customer beyond the metropolitan area of the city within which the distributor is located without making a charge equal to that made by a common carrier for the said delivery; provided, however, that transportation costs may be equalized by any individual member of the Trade acting independently as between recognized wholesaling centers. Where necessary, the Divisional Code Authority at the request of the Code Commission, subject to the approval of the Administrator, shall define the metropolitan areas within a district.

SECTION 4. It shall be an unfair trade practice to ship any goods on consignment except products of manufacturers whose general plan of distribution is by consignment and not by

sale for resale, and except where the Divisional Code Authority under unusual circumstances may allow.

SECTION 5. It shall be an unfair trade practice to accept returned goods after sixty days from the date of shipment, or to accept returned goods within such sixty day period, without making a service charge at least equal to the seller's cost of handling the same; provided, however, that this section shall not apply: (a) if the occasion for the return is the fault of the member of the Trade; or (b) if such credit is made on account of insolvency or financial embarrassment of the customer and is reported to and approved by the Divisional Code Authority; or (c) to the extent that this Section may conflict with the law of any State.

SECTION 6. It shall be an unfair trade practice for any member of the Trade to sell any electrical apparatus, appliances, materials and/or supplies sold for use in connection therewith (except radio apparatus and supplies) governed by this Supplemental Code from which the name plate, serial number, or any other identifying mark of the manufacturer, if any is customarily attached, has been effaced or removed.

SECTION 7. It shall be an unfair trade practice for any member of the Trade to employ subterfuge, directly or indirectly, to avoid or attempt to avoid the provisions of this Supplemental Code or the purposes and intent of the National Industrial Recovery Act, which are to increase employment, provide better wages, promote fair competitive methods, better business conditions, and promote the public welfare.

SECTION 8. It shall be an unfair trade practice for a member of the Trade to grant to a customer a discount for cash at a percentage greater than the

percentage of discount for cash received by such member of the Trade on the same merchandise, or to allow extra discounts for anticipation of payment, or to allow a discount for cash on accounts remaining unpaid after the tenth of the calendar month following date of shipment, or to grant any discount for cash where payment is made by warrant, note or trade acceptance.

SECTION 9. It shall be an unfair trade practice to pay or absorb any charge for sales promotion material of any nature furnished by the manufacturer through the medium of the wholesaler to the dealer; provided, nothing contained herein shall prohibit bona fide cooperative advertising.

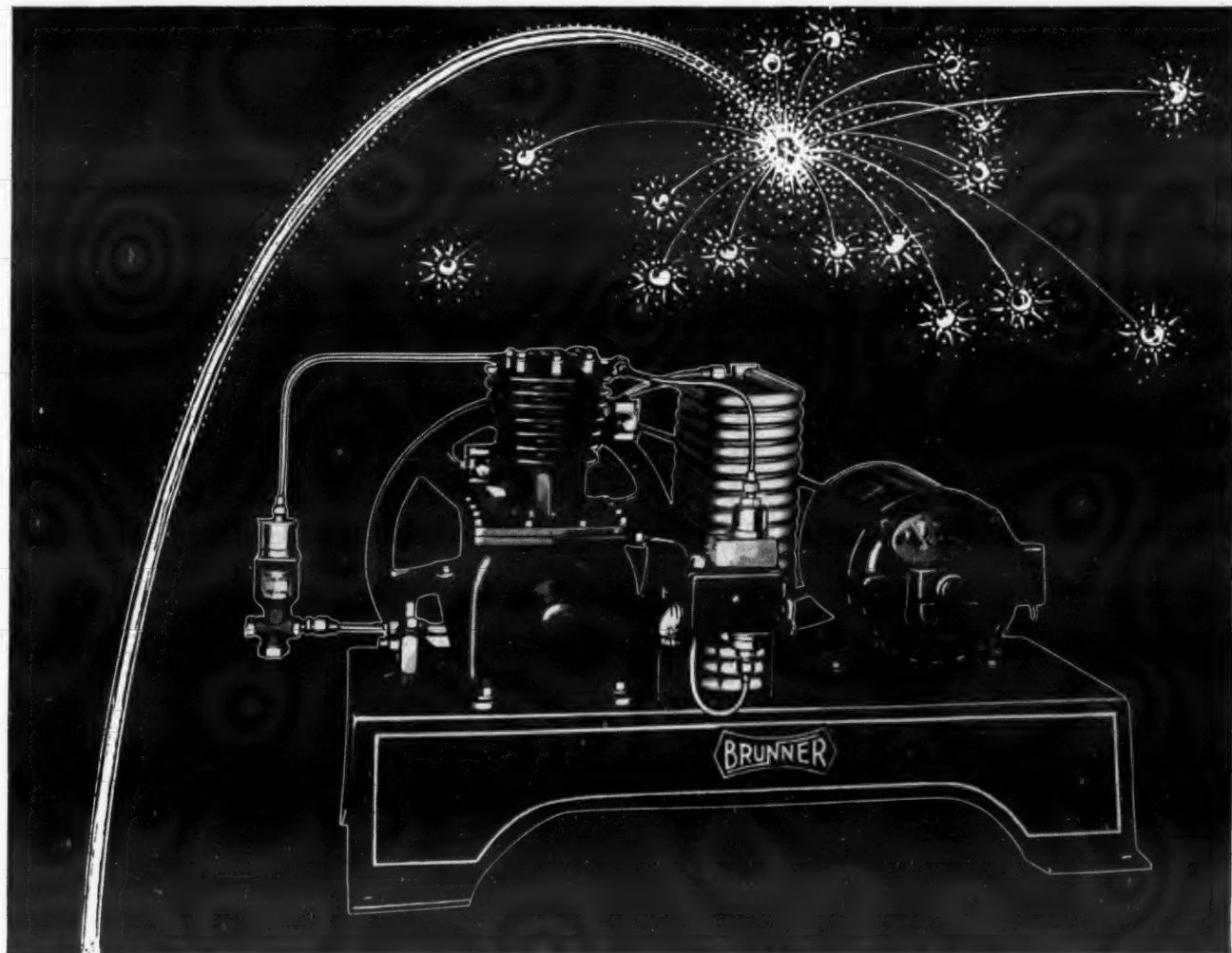
Article V—Permissive

Trade Practices

SECTION 1. In any Trade Area, if a majority in numbers and volume of all known members of the Trade in said Area vote in favor of establishing uniform operating hours, such a schedule of uniform operating hours may be recommended through the Divisional Code Authority to the Administrator for approval. After approval by the Divisional Code Authority and the Administrator, after such notice and hearing as the Administrator may prescribe, said uniform hours shall be binding upon all members of the Trade in such Trade Area.

Article VI—Modification

This Supplemental Code and all the provisions thereof are expressly made subject to the right of the President in accordance with the provisions of Subsection (b) of Section 10 of the National Industrial Recovery Act from time to time to cancel or modify any order, approval, license, rules or regulations issued under Title I of said Act.



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Brunner

A NAME BUILT BY 28 YEARS OF SERVICE

CORPORATE HISTORY-Continued

(Continued from Page 12, Column 5)

Illinois Refrigerator Co.

Morris, Ill.
Incorporated April 23, 1893 (Illinois).
In 1929 took over the wooden toy manufacturing business of the Rich Mfg. Co.
Officers (May 27, 1931): E. A. Smith, chairman of board; F. L. Smith, pres. & gen. mgr.; H. J. Rendall, v. p.; H. L. Kirberg, treas.; A. W. Collins, secy.
Directors: E. A. Smith, F. L. Smith, H. J. Rendall, G. W. Robinson, L. O. Woods, L. W. Ramsay, and F. P. Hixon. E. A. Smith was president of the Smith Trust & Savings Bank of Morris.
Manufactured school equipment, wooden toys, ice boxes, and electric refrigeration cabinets.

In 1931 A. W. Richards was general manager in complete charge of operations. He was previously in liquidation work in connection with Chicago banks, and formerly with RCA Victor Corp., and Grigsby-Grunow Co.

On Feb. 22, 1932, Richards was reported no longer connected with the business.
On Feb. 27, 1932, this creditor's committee appointed: Morton Keeney, chairman of Butterfield, Keeney & Armberg, attorneys, Grand Rapids, Mich.; W. T. R. Smith, Collis Co., Clinton, Iowa; Mr. Hinckley of Insulite Co., Minneapolis; Mr. Melhorn of American Rolling Mills Co.; and Mr. Blair of Ralph L. Smith Lumber Co., Kansas City, Mo.

On March 16, 1932, an involuntary petition in bankruptcy filed against Illinois Refrigerator Co. by the following creditors: O'Neil, Duro Co., Milwaukee; Crowe Name Plate & Mfg. Co., Chicago; Grand Rapids Varnish Co., Grand Rapids; Grand Rapids Brass Co., Grand Rapids; Frank Burch (Sterling, Ill.), was appointed receiver March 22, 1932. On April 26, 1932, the firm was succeeded by the Rich-Illinois Mfg. Co.

In August, 1934 (Aug. 22, ERN), properties of Rich-Illinois were acquired by the City Ice & Fuel Co. of Cleveland to build its own ice refrigerators and comfort-cooling equipment under the company name Ice Cooling Appliance Corp.

Indian Motorcycle Co.

Present address: Springfield, Mass.
Incorporated Oct. 16, 1913 (Massachusetts), as Hendee Mfg. Co., the name being changed to Indian Motorcycle Co. Oct. 5, 1923.

In April, 1930, the company acquired substantial interest in the DuPont Motors, Inc., and a short time later controlling interest in the Indian Motorcycle Co. was acquired by E. DuPont, F. I. DuPont and Associates.

Indian Motorcycle Co. charged off its investment in DuPont Motors, Inc., in 1931, and on Feb. 8, 1933, Scott S. Baker was appointed receiver for DuPont Motors, Inc., Wilmington, Del.

Officers (Feb. 9, 1934): E. Paul DuPont, pres.; F. I. DuPont, v. p.; L. F. Hosley, v. p. & gen. mgr.; L. B. Mason, secy.-treas.
Directors: H. L. Adams (Haverford, Pa.); E. P. DuPont (Wilmington, Del.); F. I. DuPont (Wilmington, Del.); Hosley (Springfield, Mass.); L. B. Mason (Springfield, Mass.); W. I. Tracy (South Orange, N. J.); J. A. Wright (Springfield, Mass.).

At present the company manufactures the Indian Motorcycles and parts which are sold throughout the world to approximately 450 domestic and foreign dealers.
It went into the electric refrigeration business in 1928, manufacturing the "Indian Rotator" machine. This had a direct-connected rotary compressor, used SO₂ as refrigerant, and was manufactured in household sizes only. Machine was built above the food compartment. Cabinets were bought on the outside.

Principal designer of the machine was Howard Denny. A. A. Anderson was in charge of refrigeration and at that time Louis E. Bauer was president.

Refrigeration activity and machine design was taken over by Sunbeam Electric Mfg. Co. of Evansville, Ind., in 1929.

International Oil Heating, Inc.

3800 Park Ave., St. Louis, Mo.
Incorporated Nov. 3, 1926 (Missouri), as International Heating Co. Officers (1933): S. J. Heiman, pres.; S. I. Berger, v. p. & treas.; T. L. Brown, secy. Directors: the officers.

Berger and Heiman are also executives of Preston Mfg. Co. and reported interest in Lloyd-Hill, Inc.

Manufactured household electric refrigerators and oil burners. The refrigerator units used SO₂ and were belt-driven. Had thermostatic control. Models were 4, 5, and 7-cu. ft. capacities.

Involuntary petition in bankruptcy filed Feb. 1, 1934, and F. H. Brown was appointed receiver. Machinery, equipment, and merchandise were sold at public auction March 9, 1934. It was said that Heiman and Berger, president and vice president of the company purchased practically all equipment, merchandise, and good will at the receiver's sale.

Iron Mountain Co.

Last known address:
939 East 95th St., Chicago, Ill.
Chartered Jan. 1920, (Illinois). Absorbed Jackson Park Machinery Co., (incorporated) 1919, (Illinois).

Officials listed in ERN Feb. 2, 1927: C. Edgar Jernberg, pres.; L. C. Keely, v. p. & sales mgr.; O. H. Anderson, secy. & gen. mgr.; W. A. Moreland, advertising mgr.; W. E. Bihl, chief engr.; W. J. Kuebler, prod. mgr.; R. E. Paley, serv. mgr. Officers (1928): C. Edgar Jernberg, pres.; C. R. Jernberg, v. p.; L. C. Keely, v. p.; O. H. Anderson, secy.-treas. & gen.

mgr.; R. H. Hight, sales prom. mgr. Directors: Officers and Carl Jernberg. Company manufactured "Zerozone" electric refrigeration products. According to ERN May 25, 1927, company made household and commercial electric refrigeration units using Seeger cabinets. Also made units for ice cream cabinets, soda fountains, water coolers, and other special applications.

The household machine used a reciprocating compressor, employed sulphur dioxide as a refrigerant, was equipped with thermostatic control, and used 1/4-hp. motors.

Reported Feb. 14, 1929, that corporation intended to increase capital stock and change its name to Zerozone Corp.

Under the name Zerozone Corp. the company built up nationwide distribution on both household and commercial systems, and in 1934 an advertisement claimed that over 250,000 Zerozones were in successful operation.

In February, 1931, the company was placed in receivership, with Straus National Bank acting as receiver in equity. This arrangement continued for some months until creditors became dissatisfied. Next change was the organization of a syndicate headed by A. H. Richland of New York City.

Operating under this arrangement, sales were made in St. Louis, New York City, and Chicago until a bankruptcy was declared in the spring of 1934.

Winslow-Baker-Meyering Corp. of Detroit purchased the business, patents, tools, etc., and promptly announced their intention to continue the Zerozone operation. C. E. Jernberg, former president, was placed in charge of operations, with offices at 205 W. Wacker Drive.

Iroquois Electric Refrigerator Co.

Last known address:
1600 Arch St., Philadelphia, Pa.
Factory: Buffalo, N. Y.

Incorporated in May 1927, (Delaware). Officers listed in ERN Feb. 2, 1927: Arthur W. Sewall, pres.; C. W. Bayliss, v. p.; Frank Seamans, v. p.; A. L. Robinson, v. p.; E. R. Ritter, secy.; Ira Atkinson, treas.; W. F. Hartzell, adv. mgr.; F. A. Browne, consulting engr.; A. L. Bell, prod. mgr.

Directors (July 18, 1927): Arthur W. Sewall, T. W. Bayliss, Frank Seamans, Ira Atkinson, E. R. Ritter, F. E. Leiten, and C. W. Sands. A. L. Robinson, former vice president, died March 28, 1927.

Officers and directors were identified with Barber Asphalt Co., said to be one of operating companies of General Asphalt Co.

Company organized to market electric refrigerating appliances manufactured by Barber Asphalt Co. at its Iroquois works, Buffalo, N. Y.
According to ERN, May 22, 1927, Iroquois Electric Refrigerator Co. manufactured household electric refrigerators, pumps, compressors, condensers, expanders, float valves, and other control devices.

Machine had rotary compressor, used ethyl chloride as refrigerant, had header-type condenser, direct expansion coil, and automatic pressure control, and used a 1/4-hp. motor.

According to ERN, Feb. 16, 1927, it built its own cabinets to some extent, but also used cabinets made by Seeger Refrigerator Co., St. Paul, Minn., and Bohn Refrigerator Co., Minneapolis, Minn.

On May 23, 1929, company was liquidating and preparing to go out of business. Barber Asphalt Co. had abandoned its line of electric refrigerators. During its existence, Iroquois Electric Refrigerator Co. operated as a merchandising unit of the Barber Asphalt Co.

Certificate of dissolution for Iroquois Electric Refrigerator Co. was filed with Secretary of State of Delaware on April 17, 1931, according to a statement signed by Barber Asphalt Co., F. J. Robertson, treasurer.

Isko Co.

Present address (of parts and service firm): 2362 Clybourn Ave., Chicago, Ill.

Incorporated early in 1916 as Isko, Inc., buying out Mechanical Refrigerator Co. of Chicago. Moved all machines, equipment, dies, fixtures, tools to Detroit. Factory was located at 1735 Mt. Elliott Ave. where the first "Isko" machines were built. Capital for the Detroit venture was furnished by Henry B. Joy of Packard Motors.

Mechanical Refrigerator Co. spent over four years developing an electrically driven, automatic, mechanical refrigerating machine, of a size suitable for domestic installation. Fred W. Wolfe was the inventor. Machine was single-cylinder, reciprocating type, air cooled, belt driven. Condenser coil was known as the C. B. model and looked very much like a bird cage. Direct expansion coil was used.

This type machine was followed later in 1916 by another in which the only change being from the single-cylinder compressor to eight-cylinder rotary piston compressor of Gnome type. About 450 of these were produced. Next change was to a two-cylinder compressor, reciprocating type, with eccentric-type crankshaft, and an automobile-type valve assembly. This compressor was not entirely satisfactory and most of them were called in, but about 500 of these C.B. machines with compressors replaced were in service.

Later type compressor known as model R.B. of two-cylinder reciprocating type were produced early in 1917, in which the condensing coil was replaced by automobile-type radiator. Motor also changed from 1/4 hp. 1,165 r.p.m. previously used to 1/2-hp. 1,750 r.p.m. motor. Over 1,500 of these were built. All these machines mentioned above were equipped with the Anderson type switch and thermostat, the G-E thermostat being adopted beginning in 1918.

During the development period, many improvements were made in the design of condenser, expansion valve, expansion coil, etc. It was also during this period that the nucleus of the distributing organization was developed, consisting of about 25 distributors.

It was found that the air-cooled machine did not meet all climatic conditions and it was decided February, 1918, to change from the air-cooled type to the water-cooled machine. A new company was organized under the name Isko Co., and manufacturing rights of the rotary heringbone gear compressor were purchased

from Leonard Pump & Motor Co. This type eliminated the valve assembly and many moving parts necessary with reciprocating compressors. First development work on this gear type machine was done by Frostmaker Co. of Chicago. This was built in five different sizes, 250 lb., 500 lb., 1,000 lb., and 1 and 2 ton.

Isko Co. designed its first gear-type machine for use by the Emergency Fleet on which Government tests were to be made. However, the Armistice was signed and the order cancelled before tests had been completed. From the Frostmaker and Emergency Fleet machines, the Isko model 20 and model 200 machines were developed, the first ones being put into service in the summer of 1919. It was stated that in 1921 the Isko Co. had in its factory one of the small Frostmaker machines with a record of over 43,000 hours of continuous operation.

The Isko Co. was operated at 2525 Clybourn Ave., Chicago. On Nov. 1, 1921, an involuntary petition in bankruptcy was filed against the corporation, and the Chicago Trust Co. of Illinois was appointed receiver.

The assets were sold at public auction, being sold piecemeal to various purchasers about in January, 1922.

Frigidaire bought the patents, most important of which was Wolfe's patent No. 1,337,175 on air cooling of condensers. The good will of the company was bought by the Automobile Liquidation Co. which operated for some time and eventually turned it over entirely to Frank B. Ley. Sept. 9, 1930, Frank B. Ley was given as proprietor and Howard F. Fassett was mentioned as manager of the Isko Co. Ley was claimed to be the sole owner of the business.

Ley is still in the business of repairing Isko machines and furnishing service parts at 2362 Clybourn Ave., Chicago, but no manufacturing is done.

Jack Frost Electric Refrigerator Corp.

Last known address:
3109 Beverly Blvd., Los Angeles, Calif.

Incorporated Feb. 17, 1928, (California).

Incorporators: C. A. Willat, I. V. Willat, J. W. Cuthbert, Irma Allen, D. F. Watson. Officers: C. A. Willat, pres.; I. V. Willat, secy.-treas.; I. V. Willat was motion picture director and vice president of W. J. Hanse, Inc., dealers in electric refrigerators located at same address.

He was husband of Billie Dove, motion picture actress.

Jack Frost Electric Refrigerator Corp. never became fully active and was discontinued by August, 1929.

Jack Frost Refrigeration, Ltd.

Last known address:
347 Sorauren Ave., Toronto, Ont., Can.

Incorporated March 21, 1921, (Ontario, Canada) to take over assets of defunct Jack Frost Ice Machine Co., Ltd., (adjudged bankrupt Jan. 13, 1928).

Officers reported by ERN May 25, 1927 for Jack Frost Ice Machine Co., Ltd.: John G. O'Brien, pres.; F. Mayhew, v. p.; G. Argument, secy.-treas.; John C. O'Brien, gen. mgr.; Fred C. Baker, sales mgr.; T. L. O'Brien, gen. supt.; W. Thornton, asst. supt. in charge of installation and servicing.

Company made household and commercial electric refrigerators and units for ice cream cabinets, soda fountains, water coolers and soft drink cabinets.

The Jack Frost machine had rotary type compressor and was direct-driven. Refrigerant used was SO₂. Had both pressure and temperature control. System was either dry or flooded with low-side float. Century motors were used.

Officers of Jack Frost Refrigeration Ltd., (1931): Hugh Gall, pres.; F. H. Willis, v. p. & managing director; G. M. Atkin, secy.-treas.; P. A. Douglas, director; A. T. Bachus, accountant.

Company manufactured a line of refrigerating machinery. It was handicapped by lack of liquid capital. Assets had been assigned and at a meeting of creditors, F. P. Higgins was appointed custodian, according to a report of Dec. 16, 1931.

Business has been discontinued.

Karge Laboratories, Inc.

Last known address: Phoenix, N. Y.

Incorporated September, 1921 (New York), to manufacture heating and refrigerating apparatus. Did experimenting work in both Oswego and Phoenix, N. Y., but so far as can be learned never brought out any products. Activities ceased in the fall of 1924.

Officers: M. R. Karge, pres.; F. S. Karge, secy.-treas.

M. R. Karge moved to Oneida, N. Y., in 1924 and became interested in the Oneida Refrigeration Construction Corp. but left it during summer of 1925.

Keep Cool—See General Refrigerating & Mfg. Co.

Keystone Refrigerating Corp.

Last known address:
603 First National Bank Bldg., Pittsburgh, Pa., and Beaver Falls, Pa.

Established at Beaver Falls, Pa. (Delaware corporation).

Officers listed in Feb. 2, 1927 issue of ERN: W. B. Atwood, pres. and gen. mgr.; J. B. Easter, v. p. & sales mgr.; G. W. Kilpatrick, secy.-treas.; H. S. Michael, chief engr.

May 30, 1927 issue of ERN reported that company moved offices and plant to Beaver Falls, Pa. March 15, 1927 and that Pittsburgh office would be discontinued. ERN June 8, 1927 reported that the Keystone refrigeration units would be in production October, 1927 and that the company would manufacture household and commercial units of 1/4 to 1 hp., being licensed under Romec Pump Patents.

Plant was moved to Titusville, Pa. in spring of 1929 and company reorganized as Romec Mfg. Corp.

It manufactured rotary pumps and "Keyrex" refrigeration units but the business was not very active. In August, 1930, a receiver was asked for and D. W. Campbell who had been connected with the management was appointed receiver Aug. 18, 1930.

A report dated May 5, 1932, said that company was no longer in active business and that D. W. Campbell, receiver, had offered the plant for sale several times.

King Boreas—See General Refrigerating & Mfg. Co.

King Kold—See Illinois Moulding.

Kold Stream—See Cleveland Iceless.

Kulair Corp.

Last address under this name:
1609 Finance Bldg., 1428 S. Penn Square, Philadelphia, Pa.

Kulair Corp. filed voluntary petition in bankruptcy February, 1933. It had borrowed \$50,000 from Horace Robertson, a former chairman of the board and about \$10,000 from other officers, and also had \$500 owing to outside creditors. W. M. Moss was named as receiver. Assets of concern were taken over by Roberts in satisfaction of his claim, there being no assets left for distribution to unsecured creditors.

Officers of Kulair Corp. Nov. 3, 1933: W. F. Moss, pres.; J. A. Moss, secy.-treas. Company manufactured electric refrigerators.

According to the Nov. 3, 1933, report, Moss had located at 2401 Chestnut St. and also had offices in the Guarantee Industrial Bldg. It was proposed at that time to form Kulair Products Corp., but this concern was never developed to any extent. Later it was reported that business had been wound up and discontinued and would have no successors.

Lamson Co., Inc.

Present address:
Lamson St., Syracuse, N. Y.

Corporate offices, 313 Congress St., Boston. Incorporated July, 1912, (Massachusetts). Succeeded corporation of same name formed in 1888, (New Jersey). Manufacturing plant for many years located at Lowell, Mass., with general offices in Boston. In 1922 the company built large plant at Syracuse moving entire operations there. Company is one of the principal subsidiaries of American Pneumatic Service Co.

Officers (Feb. 2, 1927, ERN): W. F. Merrill, pres.; H. W. Robinson, secy.; T. W. Dutcher, treas.; Harry W. Alexander, gen. mgr.; J. M. Mero, asst. to gen. mgr.; S. W. Phelps, wholesale mgr.; J. W. Crowley, adv. mgr.; H. L. Bruggman, prod. mgr.; H. L. Hull, serv. mgr. Advertising was in hands of Joseph Richards agency.

Officers listed in (Aug. 17, 1927) ERN: Merton L. Emerson, pres. and gen. mgr.; John S. Ogg, v. p. & treas.; H. W. Alexander, gen. mgr. of "Ice Maid" division; J. T. Crawley, chief engr.; H. F. Bruggman, factory supt.; S. W. Pierce, pur. agt.

Officers reported May 17, 1934: V. C. Bruce Wetmore, chairman of board; E. L. Bergland, pres.; G. J. Murray, v. p. & secy.; J. S. Ogg, c. p. & treas.

The company designs and builds automatic conveying systems for department stores, post offices, and other concerns.

According to May 24, 1927 ERN, it was listed as manufacturer of "Ice Maid" household refrigerators, ice cream cabinets, and soda fountains. Machines were described in Oct. 12, 1927 ERN as using rotary compressor, ethyl chloride as refrigerant, thermostatic control, and 1/4-hp. motor. Went out of refrigeration business in 1927 or 1928.

Lifelong—See Fern-Glover.

Lihyc—See Lindsay, Hyde.

Lindsay Hyde & Co.

Present address:
2130 York St., Philadelphia, Pa.

John, James, and Wm. G. Lindsay, in 1881 succeeded Felton Lindsay & Co. After death of Wm. G. Lindsay in Nov., 1920, John and James continued the business. According to May 25, 1927 ERN the following were in official capacity: Wm. Geible, sales mgr.; Wm. J. Maginnis, chief engr.; John Lindsay, works mgr. In report of Feb. 17, 1933, John and James Lindsay were given as partners.

Company manufactures Lindsay Spinning Mule or spinning frame. It also makes repairs on textile machinery and conducts a general machine shop. According to May 25, 1927 ERN, the company manufactured household electric refrigerators under the name "Lihyc." It also made tubing.

Luitweller Cam Pump Co.

Last known address:
212 N. Los Angeles St., Los Angeles, Calif.

Incorporated Sept. 29, 1927, (California), succeeding individual business of Samuel W. Luitweller.

Luitweller was practically sole owner of the business. He had originally been in Rochester, N. Y., later moving to California. In 1909, after inventing a pumping engine and operating in Los Angeles, he moved to Rochester, N. Y., incorporating as the Luitweller Pumping Engine Co., (New York), but he lost control of the company about 1924.

Nov. 7, 1928 ERN, stated that he manufactured the "California Pride" refrigerating machine. Machine had a reciprocating compressor and was cam driven, using SO₂. There were six models in the line.

Majestic—See Grigsby-Grunow.

McClellan Refrigerating Co.

Last known address:
1200 145th St., East Chicago, Ind.

Originally organized by Benjamin McClellan under Illinois laws using his name. Reorganized Aug. 1918 (Delaware). Business originally located at 504 W. Adams St., Chicago, Ill. Stock, equipment, and machinery moved in 1924 to East Chicago, Ind., occupying quarters with Edwards Valve & Mfg. Co. McClellan Refrigerating Co. was said to be a subsidiary of Edwards Valve & Mfg. Co.

Officers (Jan. 31, 1928): W. W. Crawford, pres.; O. M. Norby, v. p. & treas.; A. L. Johnson, secy.; A. Brown, asst. treas. Crawford was also president, Norby was vice president, and A. Brown was assistant secretary and treasurer of Edwards Valve & Mfg. Co.

Company manufactured refrigerators for hotels, restaurants, meat markets, and homes, but in January, 1928, it was reported to have been doing very little aside from selling replacement parts for products.

McClellan machines used ammonia in single-cylinder, reciprocating compressors up to 7 tons capacity. Condensers were all water-cooled. Units were semi-automatic in that to operate them all that was necessary was to open the water supply valve, as an automatic device threw in the electrical switch when sufficient water pressure was built up.

According to report of Sept. 20, 1929, the corporation had discontinued business and surrendered its charter sometime before. The corporation had transferred all mechanical parts, etc. to Edwards Valve & Mfg. Co.

McCrory Refrigerator Co.

Jacksonville, Fla.
Made a household compression system machine. Operated both at Jacksonville and at Houston, Tex. (Sept. 12, 1928, ERN.)

McCurdy Refrigerator Co.

Ft. Madison, Iowa.
Manufactured a small ammonia absorption machine for household use. (Sept. 12, 1928, ERN.)

McKee Refrigerator Co., Inc.

Last known address:
113 Lorimer St., Brooklyn, N. Y.

Incorporated Aug. 11, 1909 (New York), and manufactured refrigerators at the above address. In January, 1926, entire outstanding capital stock was acquired by Harder Refrigerator Corp. of Cobleskill, N. Y., and business moved to that place. Manufacturing activities were discontinued under the McKee name in about 1930, but the corporate charter was retained to protect name "McKee" used by the Harder Co. for sales purposes.

Mechana Kold Corp., Bay Shore, N. Y.

Incorporated the latter part of 1926, (New York).

Did considerable experimental work, and began to manufacture an electric refrigerator in the summer of 1927, having a factory at 5 First St., Bay Shore, N. Y. The company was allied with Kirk Wilson at 10 Lock St., Buffalo, N. Y. up until that time.

Officers (1931): S. A. Limpert, pres.; A. S. Limpert, v. p.; Wm. Ferguson, secy.; W. P. Heinen, treas.

In June, 1929 the firm moved back to Bayshore, N. Y. after a period of operation in Buffalo. Since February, 1931, located at Babylon, N. Y.

It is understood that the machine design was acquired by Ilg. Electric Ventilating Co. of Chicago, Ill.

The machine had a slow-speed (260 r.p.m.) one-cylinder reciprocating compressor, belt-driven, using methyl chloride. Was equipped with temperature control. Motors used were 1/4 and 1/2-hp. Wagner, Century, and Dayton. The company also made a complete line of metal cabinets. Developed a novel evaporator with coils cast in a heavy metal wall which gave considerable hold-over effect.

Mechana Kold returned information for 1934 Refrigeration Directory late in 1933, giving an address in Bay Shore, N. Y., manufacturers of temperature controls.

Officers (1933): S. A. Limpert, pres.; A. S. Limpert, v. p.; W. E. Heinen, secy.; R. J. Limpert, chief engr.

Michigan Refrigeration, Inc.

1600 Monroe Ave., N. W., Grand Rapids, Mich.

Incorporated Sept. 21, 1917, (Michigan), as Auto Indicator Co. Reorganized June, 1919 and again in 1921 (Delaware). May 18, 1926, corporation admitted to do business in Michigan as foreign corporation, continuing as Auto Indicator Co., until March 23, 1927 when name was changed to Michigan Refrigeration, Inc. Concentrated operations on development of electric refrigerator. Also produced automatic doughnut machine.

Officers (April 13, 1927, ERN): Joseph Renihan, pres.; V. I. Cilley, secy.-treas.; M. D. Greene, prod. mgr. Officers and directors (Dec. 5, 1931): Joseph Renihan, pres.; C. H. Lillie, v. p.; V. I. Cilley, secy.-treas.

In summer of 1928, company began to manufacture parts used with automatic phonograph and Aug. 23, 1928, the name was changed to Multi Selecto Phonograph Co. At this time Walter Icor became president with Joseph Renihan, v. p., and V. I. Cilley, secy.-treas. Jan. 1, 1931 Walter Icor resigned and the above mentioned officers came into control.

Refrigerating machines were designed by Walter Wachs, Chicago, Ill. The machine had a single-acting compressor, used ethyl chloride as refrigerant, had a high side pressure of from 18 to 24 pounds per square inch, and a 15-inch vacuum on the low side. Trade name "EL-Frig-Ette."

In 1932 the company got into financial difficulties and in that year and in 1933 assets of the company were gradually liquidated under a receivership.

PATENTS

Issued Aug. 21, 1934

1,970,562. MANUFACTURE OF FLUORO-HALO DERIVATIVES OF HEXACHLOROETHANE. Albert L. Henne, Columbus, Ohio, assignor, by mesne assignments, to General Motors Corp., a corporation of Delaware. No Drawing. Application April 10, 1931. Serial No. 529,285. Renewed Oct. 31, 1933. 4 Claims. (Cl. 260-162.)

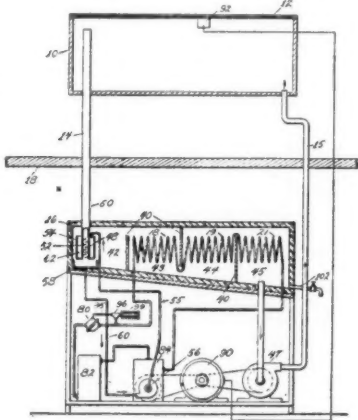
1. The process comprising lowering the melting point of C_6Cl_6 and reacting with HF to replace at least one chlorine atom with fluorine.

1,970,584. AIR CONDITIONING SYSTEM. Duncan J. Stewart, Rockford, Ill., assignor to Howard D. Colman, Rockford, Ill. Application Oct. 16, 1931. Serial No. 569,214. Renewed Nov. 8, 1933. 24 Claims. (Cl. 236-74.)

1. A system for controlling the temperature of an air current passing through a circulating duct comprising, in combination, a plurality of heat exchangers in said duct, individual valves for said exchangers controlling the admission of a temperature controlling medium thereto, individual operators for said valves each having two windings selectively energizable to determine the direction and extent of movement of the valve members, a thermostat having two switches connected to the respective windings of one of said valve operators when all of said valves are closed, switching means actuated by said last mentioned operator as the latter approaches a predetermined valve-open position to interrupt the connections between said thermostat switches and the windings of such operator and establish connections for said switches with the windings of another of said operators, and switching means actuated in the approach of said last mentioned operator to valve-closing position to transfer the connections with said thermostat switches back to said first mentioned operator.

1,970,720. REFRIGERATING APPARATUS. George B. Wagner, Winchester, Mass., assignor to Francis R. Mullin, Winchester, Mass. Application Sept. 26, 1931. Serial No. 565,351. 7 Claims. (Cl. 62-115.)

7. In a refrigerating system in combination a refrigerating coil, means for producing refrigeration in the coil including



1,970,720

a source of liquid refrigerant under pressure, an expansion valve, piping connections between the expansion valve and coil, and pressure responsive means for by-passing the liquid refrigerant around the expansion valve and into said coil for defrosting purposes.

1,970,745. HUMIDITY SENSITIVE INSTRUMENT. Worth C. Goss, Seattle, Wash. Application Oct. 19, 1931. Serial No. 569,830. 5 Claims. (Cl. 297-1.)

1. In an instrument of the character described, a plurality of co-acting humidity sensitive elements each including as a part thereof a hygroscopic wooden strip sensitive to humidity changes; the strips of the various elements being op-

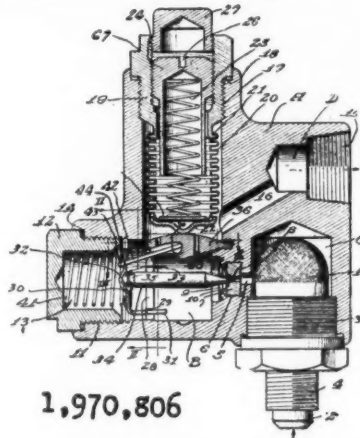
posedly arranged with respect to their fiber structure, thereby to balance in the instrument effects of warping tendencies in the individual elements.

1,970,746. INSULATION UNIT. Ralph V. Grayson and Edgar G. Ballenger, Atlanta, Ga.; said Grayson assignor to Patent and Security Holding Corp., Tampa, Fla., a corporation of Florida. Application Nov. 11, 1931. Serial No. 574,443. 4 Claims. (Cl. 154-45.)

1. Insulation unit comprising a casing of corrugated board having a laminated peripheral wall composed of a plurality of layers of corrugated board with the corrugations of adjacent layers disposed at an angle of substantially 90 degrees and a core of laminated cotton fiber sealed within said casing.

1,970,806. EXPANSION VALVE. Gustave Lidseen, Chicago, Ill. Application March 25, 1932. Serial No. 601,084. 4 Claims. (Cl. 50-26.)

1. An expansion valve structure including a valve body having a chamber in it with inlet and outlet connections, said



1,970,806

body having a restricted passage between said inlet and chamber with a conical end opening into said chamber, a pointed self-seating needle valve arranged for controlling fluid passage through said inlet and into said chamber, said valve being arranged with its point at all times within said conical opening, a clip rockably carried and supported by said body and loosely engaging and supporting the opposite end of said needle valve, a spring coaxially arranged with respect to the needle valve axis and bearing against said clip and tending to move said valve in closing direction, a second spring disposed in right angular relationship with respect to said first spring, a member interposed in said chamber between said inlet and outlet adapted to move in direction substantially perpendicular to the movement of the needle valve and positioned in the path of fluid flow from the inlet to the outlet, a link extending between said member and said clip, said link and said member constituting toggle means interposed between said second spring and said clip, said second spring being normally effective through said toggle means for maintaining said clip pressed against said first spring in a manner to normally maintain said valve in open position, and means within said chamber responsive to pressure conditions therein acting against said second spring to shorten it, such shortening of said second spring relieving resistance to said toggle means against said clip to enable said first mentioned spring to move the valve in closing direction.

1,970,947. REFRIGERATOR. John M. Schilling and Willard G. Schilling, Lima, Ohio. Application Aug. 7, 1931. Serial No. 555,654. 11 Claims. (Cl. 220-9.)

1. In a refrigerator construction, the combination of a box portion, and a stand portion, said box portion comprising a box, an upper rectangular frame, vertical corner members extending downwardly from said frame and permanently secured thereto, an integral rectangular band supporting said box, said corner members extending outside of the corners of said band and terminating adjacent the lower portion of said band, and first removable fastening devices connecting the lower ends of said members with said band, and said stand portion comprising legs engaging said band independently of said corner members and second removable

fastening devices connecting the upper ends of said legs with said band, said second fastening devices being independent of said first fastening devices and of said corner members.

1,971,002. REFRIGERATOR FRAME. Richard E. Gray, Jackson, Tenn., assignor to Piggly Wiggly Corp., Cincinnati, Ohio, a corporation of Delaware. Application Feb. 10, 1933. Serial No. 656,181. 2 Claims. (Cl. 220-9.)

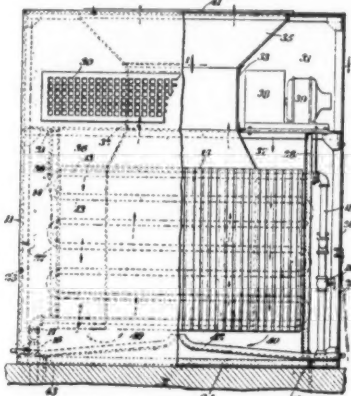
1. A refrigerator cabinet comprising a base formed of a plurality of horizontal bars arranged in rectangular formation, vertical bars positioned on the inner vertical surfaces of said horizontal bars, a casing secured to the outside surfaces of said horizontal bars, a plurality of lateral bars connected to said vertical bars being spaced from the bottom surfaces of said horizontal bars, a lining secured to the inner surfaces of said vertical and said lateral bars and insulating material positioned between said casing and said lining around said bars, substantially as set forth.

1,971,106. MANUFACTURE OF SOLID CARBON DIOXIDE. Rudolph Leonard Hasche, Tacoma, Wash., assignor to Carbonic Development Corp., a corporation of Delaware. Application Jan. 31, 1930. Serial No. 424,773. 10 Claims. (Cl. 62-121.)

1. The method of making solid carbon dioxide which comprises compressing a mixture of carbon dioxide and other gases to the neighborhood of 40 to 50 atmospheres total pressure, cooling the mixture to the neighborhood of -100° F. to cause the carbon dioxide to liquefy, the partial pressure of the carbon dioxide dropping to a value corresponding to the vapor pressure at that temperature while keeping the total pressure substantially constant, separating the unliquefied gases from the liquid carbon dioxide, throttling substantially all the liquid carbon dioxide at reduced temperature to substantially one atmosphere total pressure to form solid carbon dioxide and using the unliquefied gases as the sole cooling agent for cooling the compressed mixture below ordinary temperatures.

1,971,173. HEATING AND COOLING APPARATUS. Irving T. Bennett, Rome, and Frank C. Reynolds, New York, N. Y., assignors, by mesne assignments, to Metropolitan Engineering Co., a corporation of New York. Continuation of application Serial No. 363,873, May 17, 1929. This application Nov. 21, 1932. Serial No. 643,704. 3 Claims. (Cl. 257-9.)

1. Apparatus of the type described which comprises an enclosure having an outlet and an inlet at its upper end, a pair of



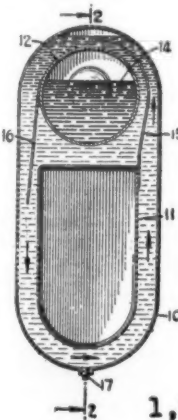
1,971,173

passages extending downwardly from said inlet, a passage connecting with said downward passages and between said passages and extending to said outlet, heat abstracting means in said downward and upward passages and means to pass a current of air from said inlet through said downward and upward passages to said outlet.

1,971,240. METHOD OF COLORING ALUMINUM. Martin Tosterud, Arnold, Pa., assignor to Aluminum Co. of America, Pittsburgh, Pa., a corporation of Pennsylvania. No Drawing. Application Dec. 17, 1930. Serial No. 502,987. 4 Claims. (Cl. 148-6.)

1. The method of permanently coloring the surfaces of aluminum or aluminum alloy articles, comprising treating the metal surface with a solution containing an alkali carbonate and a soluble dichromate to form thereon an adsorbent oxide coating, and thereafter without further treatment impregnating the coating with a soluble salt of permanganic acid.

1,971,245. REFRIGERATION. Edward T. Williams, Pelham, Manor, N. Y. Application Aug. 7, 1930. Serial No. 473,554. 11 Claims. (Cl. 62-95.)



1,971,245

7. A cooling unit comprising a closed vessel, a cooling element within said vessel having unbalanced heat transferring properties of a character to produce unidirectional circulation within said vessel.

Roy to Manage Branch For Allen-Bradley

MILWAUKEE—R. J. Roy, formerly Cleveland branch manager for the pump and electrical department of Fairbanks Morse & Co., was recently appointed district manager of the Allen-Bradley Co. Cleveland office.

Norge Engineers Use Stroboscope to Study Operations of Rollator

DETROIT—For some time Norge Corp. engineers have wanted to see exactly what goes on inside a rollator compressor when actually operating, but were blocked by the inability to look through a heavy cast iron dome and observe the movement of parts whose speed was greater than the eye could follow.

Norge laboratories obtained the latest model Edgerton Stroboscope, an instrument by means of which observation of any motion up to 10,000 vibrations or cycles per minute can be slowed down or stopped so that the part can be studied with the eye as if it were standing still. For example, presume the tip of a fan blade is suspected of vibrating, its rotation can be observed by this device as if it were standing still. With this, Norge engineers solved the problem of studying parts in motion but were still faced with the difficulty of looking into an operating rollator.

They were able to build a rollator dome with a glass insert as well as to illuminate the interior and make other needed adjustments. But the problem of making a cylinder end plate of some transparent material still remained.

The problem was turned over to Bausch & Lomb Optical Co. which after exhaustive experimentation, was able to grind two plates within the unusually accurate limits necessary for satisfactory rollator operation. A rollator of this type has been placed in operation and its movements are now undergoing tests.

One of the first things checked was to see whether the roller actually rolled around the inside of the cylinder without revolving at shaft speed. Actual roller movement inside the operating cylinder was found to be very

slow. Observations over two hour intervals showed it did not make one complete revolution, creeping about 15 degrees; proving that its position does change sufficiently to equalize any possible tendency to wear. This observation proves that the mechanism really wears in and not out.

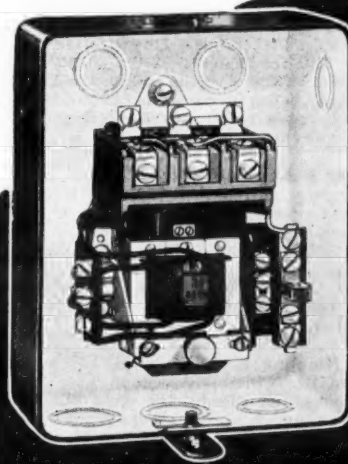
There are under way further intensive studies of the blade and oil action inside the cylinder. Pertinent data has already been obtained on oil action and oil flow, as it is forced past the ends of the roller and around the blade into the cylinder and out through the discharge valve. Likewise, studies are being conducted to see whether there is any blade vibration during operation as well as the action of the discharge valve under operating conditions.

Price Changes on Service Parts Are Announced

SAN FRANCISCO—Price changes have just been announced on several refrigeration accessories sold to service and installation men by the California Refrigerator Co. here. Tag and Ranco controls, formerly listing at \$8.75, now list at \$7.50. Rotary replacement seals now carry a 50 per cent discount instead of the former 30 per cent.

Gates belts carry a discount of 40 per cent at this firm, while Kerotest dryers formerly selling at \$5.04 now sell for \$6.75. Copper tubing prices have been raised one-half cent per pound. Fedders dryers charged have been increased in price from \$2.75 to \$3.10, while unchanged they have been raised from \$2 to \$2.75.

Automatic Starters for Refrigeration Service



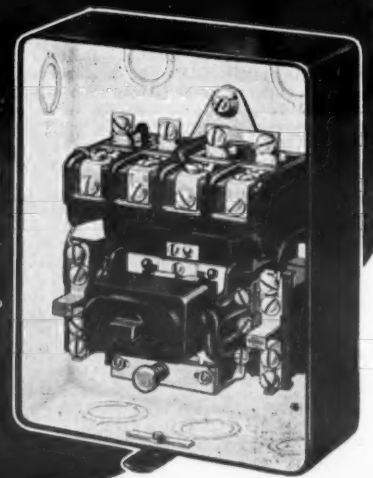
For Single Phase Motors
Bulletin 709SP

Single Phase A. C. Starter
Maximum Ratings
3 H. P. 110 V. 5 H. P. 220 V.

For Polyphase Motors
Bulletin 709

A. C. ACROSS-THE-LINE STARTER

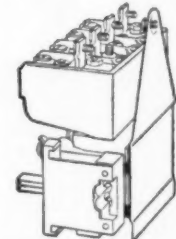
Maximum Ratings
3 H. P. - - - - 110 Volts
5 H. P. - - - - 220 Volts
7½ H. P. - 440-550 Volts



The two automatic starters, shown above, are the most popular alternating current motor starters now used in refrigeration service.

Bulletin 709 SP is the ideal automatic starter for single-phase motors; it can be used interchangeably for either 110 or 220 volts, thus simplifying stock problems.

Bulletin 709 is the most compact two- or three-phase motor starter on the market; there is ample wiring room because the switch mechanism is extremely efficient. It is small in size but large in switching capacity.



The switch mechanism is mounted in rubber grommets attached to a metal backplate. There are no slate or molded bases—all wiring is in plain view.

Accurate overload relays on both starters do away with fuses—they are tamperproof—they protect the motor against burnout from overloads. The switch contacts are made of a special alloy that requires no attention, even after long service.

SILENCE—the watchword of refrigeration engineers—is built into Allen-Bradley starters. Switch mechanisms are mounted in RUBBER—there is no hum. These switches are quiet—they are dependable!

A LIBERAL REWARD

A LIBERAL reward will be paid for information leading to proof of the existence of air-conditioning systems prior to May 3, 1918 in which air, by-passed around a dehumidifier, was mixed with conditioned air and delivered directly to a room; or prior to December 22, 1922 in which automatically varied volumes of dehumidified air and unconditioned recirculated air were mixed.

Address:
G. K., P. O. Box 187, Madison Square Station
New York, N. Y.

ALLEN-BRADLEY CO.
1313 S. FIRST STREET - - MILWAUKEE, WIS.

CORPORATE HISTORY—Continued

(Continued from Page 14, Column 5)

Montclair Refrigerating Corp.
Last known address:
133 Broadway, New York City.
Incorporated Feb. 10, 1914, (New York).
Incorporators: Ellis P. Earle, Francis Earle, Leon W. Mentien and George J. Carr.

Officers (Oct. 23, 1917): Ellis P. Earle, pres.; Francis Earle, treas.; George J. Carr, secy.; David Mills, v. p. Directors: Officers and Leon W. Mentien.
Company had a machine shop in Bloomfield, N. J., for manufacture of a small refrigerating unit. According to a report of Oct. 23, 1917, it was the impression that considerable money had been spent in an experimentation the machine at that time being considered as perfected.

The machine, which was designed by C. H. Hapgood, was made for use of ethyl chloride, "Rhinogene," and "Cynogene." As reported March 26, 1919, company had discontinued business about five months previous to that date at Bloomfield, N. J. Corporate existence of company was still maintained. May 5, 1923 company was reported to be no longer engaged in business at 233 Broadway.

Motorfrigerator Co.
Present address: Lansdale, Pa.
Chartered in Pennsylvania.

Officers (1934): James M. C. Speirs, pres.; Irwin Pool, treas.; and LeRoy Wismer, secy. Speirs is engaged in the hardware business in Lansdale, Pa. Pool is in the clothing contracting business under the name Pool & Son, and president of the Lansdale Building and Loan Association, Lansdale Thrift Bank and a director of the Lansdale National Bank. Wismer is a member of the firm of Wismer and Crouthamel Machine Shop.

The Motorfrigerator used 3/4 lbs. of ethyl chloride in a double-acting, reciprocating, horizontal type compressor with a 3-in. bore and a 1/2-in. stroke. Brine tank, air-cooled condenser, 1/2-hp. motor.
When recently interviewed, I. Pool said company had conducted business on a small scale about six or seven years ago and had done nothing since that time, although corporation remains intact.

Stanley A. Morsbach Co., not inc.
Last known address:
132 East Court St., Cincinnati, Ohio.

According to a report of Sept. 30, 1927 Morsbach was the sole owner of business. About 1917 Morsbach became secy.-treas. of Devere Electric Co.

Early in 1925, disposed of his interests in Devere Electric Co., and started business under his own name.
It was reported Sept. 30, 1927 that he had discontinued jobbing business and was selling radios and electric refrigerators which it manufactured direct to the user. Trade name was "Chil-Dare."

On Jan. 16, 1928, voluntary petition in bankruptcy was filed for Stanley A. Morsbach Co., not inc.

Narco Refrigerator Co.
Wapakoneta, Ohio.

Reported to be a pioneer in electric refrigeration field. Its stockholders were said to include many local citizens. The company discontinued business about 1924 and its assets were acquired by other companies and moved from the city.
The machine was compression type and the refrigerant was called "Andrews Liquid" from its discoverer, F. W. Andrews, a Dayton chemist and inventor. Andrews was reported as president of the company. Trade name was "Narco."

National Electric Products Co.
Last known address:
Terminal Bldg., Waukegan, Ill.

Incorporated March 31, 1928, (Illinois), as Rollefson and Pfantstiel Laboratories, Inc., being changed to National Electric Products Co., Sept. 15, 1928.
Officers (Nov. 1, 1928): John Nelson, pres.; Margaret O'Keefe, secy.-treas. Directors: Officers and Bruce Chandler.

McCord Refrigeration Products

COMMERCIAL EVAPORATORS

DOMESTIC EVAPORATORS

CONDENSERS

METLFLEX ICE TRAYS

SPIRAL FINNED TUBING

SPIRAL COPPER FINNED IRON

STEEL OR COPPER PIPE

McCord Radiator & Mfg. Co.
DETROIT, MICH.

Nelson had been general manager of Pfantstiel Radio Co. since July, 1927. Margaret O'Keefe had been asst. secy.-treas. of Pfantstiel Radio Co. and was treasurer of the Oreole Refrigeration Co., 126 North Franklin St., Chicago. Chandler was chief engineer.

The company manufactured radio equipment and other electrical devices.
The concern moved May 1, 1929 to 10 East Kinzie St., Chicago, Ill. It was represented at 753 West Jackson Blvd., Chicago, by I. A. Bennett & Co.

According to Dec. 28, 1932 ERN, it was absorbed by Servel Sales, Inc., of Evansville, Ind.

National Electric Refrigerator Corp.
Last known address:
304 Camp Ave., Scranton, Pa.

Incorporated Oct. 11, 1928, as the Electric Refrigeration Corp., name being changed to above Nov. 18, 1928.

Officers and directors (1932): Samuel Weinberg, pres.; Leonard Weinberg, secy.-treas.

Samuel Weinberg and his son, Leonard, were for many years engaged in the business of wholesale and retail stove parts. Were also interested in a Delaware corporation, Nerco Cooler Refrigeration, which was a selling organization for National Electric Refrigeration Corp. The company manufactured electric water coolers, using various makes of methyl chloride machines.

Effects of the company were sold Dec. 17, 1932, at a constable sale to L. P. Stark, and Henry Nogi, attorneys of Scranton, Pa.

National Refrigerating Co.
Last known address:
125 Munson St., or 275 Winchester Ave.,

cor. Munson St., New Haven, Conn.
According to March 16, 1927 ERN, the company was organized about March, 1927 as a subsidiary of Winchester Repeating Arms Co.

Officers (May 25, 1927, ERN): W. A. Tobler, pres.; E. S. Ensign, v. p.; F. H. Knapp, v. p.; L. H. Thompson, treas. and acting sales mgr.; G. W. Keller, asst. sales mgr. Personnel (ERN, Aug. 17, 1927): W. A. Tobler, pres.; L. H. Thompson, v. p., treas. & gen. mgr.; Edwin Puglsey, v. p.; Henry Brewer, secy.; A. H. Hodgson, asst. treas.; L. W. Crenshaw, asst. secy.; G. W. Keller, asst. sales mgr. and acting sales mgr.; John A. Lunn, sales engr.; Dr. W. R. Hainesworth, refrigeration engr.; C. S. Hunt, adv. mgr.; George H. Reama, wks. mgr.

According to March 16, 1927 ERN, company manufactured both gas and electric household models and also gas and electric commercial models using trade name "Ice-O-Lator." Machines were absorption type, using ammonia as refrigerant and had a thermostatic control.

Operations proved unprofitable and business of company was discontinued Dec. 31, 1928. No effort was made to renew business under that name. However, in 1929, patents and trade mark of the corporation were sold to the Frigidaire Corp. of Dayton, Ohio, being used in connection with Faraday absorption type refrigerator, which was built in 1932.

National Refrigerator Co.
Last known address: Greenville, Ohio.

A local concern which went out of business about 10 years ago.
The following men were interested in the organization: Odd Horner, Dr. S. A. Hawes, G. A. Schmermand, D. C. Hall, Harve Longenecker, L. E. Kerlin, all of Greenville, Ohio.

F. W. Niebling & Co.
408 Elm St., Cincinnati, Ohio.

Warehouse and plant: 848 West 6th St. Began Jan. 1, 1920. Fred W. Niebling was president of the Niebling-Markstein Co. Sold interest in that concern Sept. 1919. Before that he was president and principal owner of F. W. Niebling Co., plant of which was located in Norwood, Ohio, but in June, 1916, business of that concern was placed in hands of receiver. Fred W. Niebling and his son, Edwin Niebling, were partners. Grace Evert had formerly been mentioned as a partner, but died in April, 1926.

Sept. 10, 1928, Fred W. Niebling filed suit in Common Pleas Court against Edwin Niebling, asking appointment of receiver for the company. The court appointed Frank Bonham, receiver.

According to Aug. 17, 1927, ERN, company made refrigerating machinery and compressors and held a Niebling patent on plate valves for compressors.
Machine had reciprocating compressor, either direct or belt-driven, and used ammonia as refrigerant. (April 25, 1928, ERN.)

Nizer Corp.
7424 Mackie Ave., Detroit, Mich.

Chartered March 24, 1925 (Maryland), succeeding a corporation of the same name organized Nov. 16, 1922 (Michigan). April 30, 1925, took over Nizer Michigan Corp., and the Nizer Laboratories Co. (Michigan).

In December, 1925, a merger was announced between Nizer Corp., Kelvinator Corp. and Leonard Refrigerator Co., and on Dec. 16, 1925, the Electric Refrigeration Corp. was chartered (Michigan) to take over all the capital stock of the Nizer Corp. and the Kelvinator Corp., share for share.

It was reported April 19, 1926, that the holding company owned approximately 99 per cent of both the Nizer and Kelvinator Corp. exchanged on that basis. Each subsidiary was to do business in its own name.

In June, 1926, Nizer officers were: H. A. Tremaine, chairman of the board & treas.; Glen P. Cowan, pres.; J. Robert Crouse, v. p.; O. A. Glazebrook, Jr., v. p.; J. V. Oxtoby, secy.

Officers as given in a report of Oct. 4, 1926, were: J. Robert Crouse, pres.; Arthur Berresford, v. p.; Merlin Wiley, secy.; O. A. Glazebrook, Jr., treas.; K. L. Mackay, asst. treas.; Frank L. Wurl, asst. secy.

According to a report of Dec. 20, 1926, Electric Refrigeration Corp. took title to practically all assets of Nizer Corp. keeping a skeleton charter to retain title, name, and good will.

Nizer plant was operated as a division of the parent company, having its entire responsibility merged therewith.

In Feb. 2, 1927, ERN the following

executives were given: A. W. Berresford, exec. v. p.; F. L. Wurl, asst. secy. & prod. mgr.; K. J. Mackay, asst. treas.; H. A. Sieck, sales mgr.; Gordon Muir, adv. mgr.; J. R. Replogle, chief engr.; T. D. Puckett, service mgr.

Dec. 23, 1927, it was reported that the Nizer plant on Mackie Ave., had been closed for the better part of a year after moving machinery and equipment to the plant of the Electric Refrigeration Corp. at 14250 Plymouth Rd., Detroit. Nizer Corp. was then known as the Nizer Division of the Electric Refrigeration Corp.

The Nizer machine was a one and two-cylinder outfit, built in both air and water-cooled types. Compressor was driven by a worm gear at a speed of 175 r.p.m. Refrigerant: SO₂. Flooded type evaporators with a low-side float valve.

J. R. Replogle and Frank R. Wurl, who joined the Nizer staff in the summer of 1921, made numerous contributions to the art of refrigeration, developing controls, evaporators, brine tanks, etc. to produce practical ice cream cabinets. As result of this pioneer engineering, many important patents were granted by the United States and foreign countries.

The first Nizer ice cream cabinet to be installed for actual use in a store was put in Jan. 22, 1922, and was successful. Demand grew rapidly and a plant in Detroit of sufficient size to standardize Nizer cabinet production was equipped for the manufacture of these cabinets. Over 13,000 were built in two years.

North Pole Corp.
Last known address:
21 Florida St., Belleville, Ill.

Incorporated April 22, 1932, (Illinois). Officers (1932): Julius S. Seib, pres.; Eugenia Hallbauer, treas.; Paul Wagner, secy. Directors: officers, Frieda Seib and R. N. Cooper.

North Pole Corp. succeeded Modern Refrigerator Co., organized several years before to act as sales division of Modern Die Plate Press Mfg. Co.

Company manufactured electric refrigerators, cabinets, fixtures, etc. Completed about 60 milk cooling cabinets for a St. Louis dairy, but volume of sales is understood to be small.

Nov. 9, 1932, name was reported changed to Belleville Refrigeration Co.

North Star Refrigerator Co.,
Chattanooga, Tenn.

On Dec. 20, 1919 Tennessee Furniture Corp. was incorporated (Tennessee), being a consolidation of four companies.

The four companies were: North Star Refrigerator Co., Richmond, Ind.; Odorless Refrigerator Co., Loomis & Hart Furniture Co.; Acme Kitchen Furniture Co., all of Chattanooga.

The four companies had been controlled by same stockholders and Tennessee Furniture Corp. assumed all assets and liabilities of preceding firms. Active business under Tennessee Furniture Co. charter began Jan. 1, 1920.

Norwest Sales, Ltd.,
Grandville Island, Vancouver, British Columbia.

Incorporated June 1, 1931, (British Columbia).

Reported July 18, 1931 as having purchased equipment of Northwestern Mfg. Co., Ltd., which had been unsuccessful. Officers (1931): E. D. Clarke, director; E. B. Clegg, director; W. Russell Watson, manager.

E. B. Clegg died Oct. 3, 1931 and no successor was appointed.
Entered bankruptcy Dec. 29, 1931, with G. L. Salter, trustee, Jan. 11, 1932. The company manufactured refrigerators.

Odin—See Devon.

Oklahoma Radio Mfg. Corp.,
Present address:
219 S. Boulder St., Tulsa, Okla.

Incorporated Oct. 6, 1930, (Oklahoma). Officers and directors (1933): James P. Kay, pres.; Frank H. Miller, v. p.; Joe T. Trimble, secy.-treas.

Manufactured radios and electric refrigerators, buying and assembling parts to finish product. Used names "Kay Radio" and "Kay Refrigerator." Sold at wholesale and retail, also did radio and refrigerator repairing.

Reported out of business when 1934 Refrigeration Directory was being compiled, but reported still in business Aug. 18, 1934. Formerly located at 1544 East 15th St., Tulsa.

Parker Ice Machine Co.
943 Third St., San Bernardino, Calif.

Incorporated Sept. 13, 1910 (California), as the Parker Iron Works, Inc. Name changed to the above Sept. 19, 1925.

Officers (March 8, 1930): W. M. Parker, pres.; H. C. Parker, secy. Directors: Officers, C. M. Crew, Frank A. McGinnis, W. E. Sheppardson.
W. M. Parker was a director in the San Bernardino County Savings Bank and H. C. Parker, a mechanical engineer. Crew was business agent for the Southern California Gas Co. of Los Angeles. McGinnis was formerly general manager of Santa Fe Ice Plant owned by Santa Fe Railway Co., with headquarters in Los Angeles.

The company manufactured and installed refrigerating machinery and similar equipment. Both sulphur dioxide and ammonia machines were manufactured and a complete line of equipment in the commercial field was carried, in addition to household refrigerators.

Maintained branch offices at 2600 Santa Fe Ave., Los Angeles, 750 State St., San Diego, El Centro, Calif.; and San Francisco.

Distribution outside of southern California was by dealers in Seattle; Phoenix; Albuquerque; Ogden; Denver; Mexico City, Mexico; Hawaiian Islands; Philippine Islands; New Zealand; and other foreign countries.

In 1933 R. P. Mason, Federal receiver in equity for Parker Ice Machine Co., was conducting the business.

Penguin Refrigerator Co.
Dubuque, Iowa.

A small ammonia absorption type machine. (Sept. 12, 1928, ERN.)

Phillips Refrigerator Co.
Last known address:
Georgetown, Ont., Canada.

Formerly at 393 Keele St., Toronto. Frank R. Phillips claimed to be sole owner Dec. 16, 1930, but name does not appear to have been registered.

Manufactured refrigerators, store fix-

tures, kitchen furniture, etc., in a small way in Toronto.

Reported Jan. 25, 1933 that business and plant had been moved to Georgetown, Ont.

Polar Air Electric Refrigerator Co.
1610 North St., Philadelphia, Pa.

Started in 1922 (Delaware). Officers (June 22, 1927, ERN) were: L. V. Gillian, pres.; F. N. Minor, v. p.; R. M. Cook, secy.-treas.; C. J. H. Freeth, sales mgr.; Joseph Roman, serv. mgr.

Officers reported (July 11, 1928): F. N. Minor, Frank Kemlein, C. J. Freeth, R. M. Cook, Samuel Goodhart, no titles being given.

Minor was a mechanical engineer, treasurer of the Atlantic Bond & Mortgage Co. of New Jersey and also connected with New Ton Limestone Products Co. Kemlein was an engineer. Cook was branch manager of a large retail piano concern.

Company originally organized to develop and market electric refrigerator units. Spent several thousand dollars in development when business was practically discontinued due to lack of capital. Patent rights were acquired by the persons above-mentioned.

Discontinued business in about July, 1928, without leaving a forwarding address. ERN June 22, 1927, reported the company manufacturing household electric refrigerators, commercial machines, motors for household machines, tubing, condensers, expanders, pressure controls.

Polaris Electric Refrigerator Co.
417 First St., Logansport, Ind.

Organized Jan. 26, 1926 (Delaware). Succeeded Univerco Corp., originally located at 431 Ohio St., Chicago, Ill. Later acquired plant of Revere Motor Co., Logansport, and discontinued Chicago branch.

Officers (ERN Feb. 2, 1927): C. H. Canode, pres., treas., sales mgr.; J. S. McManus, Sr., v. p.; C. C. Darnell, second v. p. & gen. mgr.; C. W. Church, secy.; John Dubrovnik, chief engr. & prod. mgr.; Fred Grundy, serv. mgr.

Feb. 3, 1928, Henry Crause was reported as treas.

The company became financially embarrassed and in December, 1927, called meeting of the creditors for Jan. 10, 1928. At that meeting 90 per cent of creditors were represented and it was decided that all creditors hold claims in abeyance for six months.

A large part of the indebtedness was borrowed money advanced by three stockholders: Henry A. Crause, H. Stearns, Charles Canode to the amount of \$71,000, to which they agreed to take stock for settlement.

The company manufactured an electric refrigerator which was considered to have merits although a large number had been found defective. According to May 25, 1927, ERN, company made household and commercial electric refrigeration units, units for ice cream and soda fountain use, and also complete electric refrigerators under the trade name "Polaris."

Rex cabinets were used in 1927. According to ERN April 13, 1927, Polaris-Gem cabinets were also used. They used Pyroline and Wirls "airtight" gaskets.

Discontinued active operations early in 1928, disposing of plant, and storing machinery and equipment until a new location could be found.

Records in the U. S. District Court of South Bend, Ind., show a petition in involuntary bankruptcy filed Aug. 13, 1928, by following creditors: Day Fan Electric Co., International Spring Co., Binks Spray Equipment Co.

City National Bank of Logansport was appointed receiver and disposed of company's assets.

Complaint for receiver had been filed by Henry C. Crause, a director of the company, with a claim of \$10,000 advanced money, according to a report of June 29, 1928.

Purecold Products of America, Inc.
Last known address:
100 East 42nd St., Room 519, New York City.

Incorporated Jan. 8, 1926, (Delaware). Numerous changes in personnel since the beginning of the company. Officers (June, 1927): T. A. Scott, pres.; E. T. Rogers, v. p.; Mathews Brown, secy.-treas.; N. B. Wales, technical director; A. W. Bowie, consulting engr.; Dr. I. A. Frankel, asst. secy.; J. E. Barlow, v. p. Directors: Thomas A. Scott, E. T. Rogers, A. W. Bowie, Dr. I. A. Frankel, C. A. Reed, J. E. Barlow, N. B. Wales, E. S. Daniel, Jr., W. E. Wild.

In a report of Feb. 7, 1929, officers were: A. W. Bowie, pres.; C. E. Carpenter, v. p.; Mathews Brown, secy. & treas. Directors: Officers, L. Rice, Jr., and Julian Rice.
Bowie was formerly a consulting engineer and senior member of A. W. Bowie & Co., industrial engineers.

Brown was a member of Mathews Brown & Co., auditors and accountants, and a director of the United Electric Utilities, Inc.
Carpenter was vice president of Rice Products, Inc. I. L. Rice, Jr., a director, was vice president of the Carr lighting & Power Co., Inc., which was organized Dec. 28, 1908 to take over the business previously carried on by Consolidated Railway Light & Refrigerating Co. He was also vice president of Clothel Refrigerating Co., Inc.

Julian Rice, brother of Isaac Rice, was secretary of the United Electric Utilities, Inc. and also secretary of Rice Products, Inc.
The company made its headquarters at above location together with Rice Products, Inc., and other affiliated concerns. The Purecold Products of America, Inc., for a number of years had its offices at 21 East 40th St., where considerable experimental work on refrigeration was carried out. It was understood to have developed a refrigerating unit which it licensed to others on a royalty basis.

Purecold was an ethyl chloride rotary compressor driven by a special 1/2-hp. Westinghouse motor, direct-connected with the compressor.

The company has been inactive since the early part of 1931.

Paritan—See Quality Products, Inc.

Quality Products, Inc.
Present address: 199 Bacon St., Dayton, Ohio.

Formerly: Dayton Industrial Bldg., Dayton, Ohio.

Incorporated July 1, 1931 (Ohio).

Officers and directors (1932): Claude Burnett, pres.; H. R. Elcher, v. p.; J. R. Burnett, secy.-treas.; C. L. Janning, mgr. Claude Burnett was active in the manufacture of household pumps and water softeners as head of the Duro Co. from which he withdrew in 1931. Elcher was also connected with the Duro Co.

Quality Products, Inc., had practically all manufacturing and assembling of its refrigerators done by outside firms.

The 1932 Refrigeration Directory showed six household models for the company, all trade-marked "Puritan." Illinois and Eagle cabinets were used, and a 1/2-hp. reciprocating compressor built by the Auto Compressor Co. Sulphur dioxide, a low-side float, shell type evaporator, Ranco controls, and McCord condensers were other specifications.

In June, 1934, the business was reported as having been more or less inactive. Offices were removed to 199 Bacon St. (Premier Engineering Co.). Claude Burnett died in May, 1934.

Rauk Mfg. Co.
Last known address:
30 Central Ave., Bogota, N. J.

Entered refrigeration business about 1927. A report of April, 1929, states that they maintained an office at the residence of Joseph Raufelsen, with a showroom at 95 West Shore Ave., Bogota.

Associates in business were: Joseph Raufelsen, Ralph Engle, Ronald Brohm. Raufelsen was a mechanical engineer employed by McClellan Yorkesville Printing Co., Liberty St., New York City. Became associated with Engle and Brohm in October, 1928.

They were said to have an investment of about \$2,000 in merchandise and equipment. According to ERN, machine used by company was invented by J. E. McCarty. According to Rex Mfg. Co., they used 18 Rex cabinets.

Refrigo Corp.
Last known address:
18th & Forest Home Aves., Milwaukee, Wis.

Incorporated Feb. 4, 1928, by Peter E. Dennison, Daniel A. Stevens, and Richard J. Patterson. Took over defunct accounts of Refrigo Corp., organized June 9, 1920 (Wisconsin).

On July 13, 1928, Max Lupinski, who was in charge of the office at that time, stated that they expected to begin operations in a short time.

Officers on July 24, 1928: P. G. Dennison, pres.; Max Lupinski, v. p.; Henry Bormann, secy.; R. J. Patterson.

On Oct. 30, 1928, E. M. Brah was appointed receiver to trustee Thomas E. Carrigan and plant was taken over by bondholders. The company was no longer in operation, and the plant idle at that time.

Republic Tool Products Co.
Present address:
915 Valley St., Dayton, Ohio.

Chartered July, 1920 (Ohio). From inception of company until April 20, 1928, Louis Kronauge was secy.-treas. and a principal stockholder, but on this date his interest was purchased by C. F. Black.

E. D. Miller who is said to own about half of stock had been identified with concern since its beginning.

Company has own plant in outlying section of Dayton, and manufactures and markets toys, also doing job machine work, and since early in 1932 assembling and selling the Republic electric refrigerator.

Although the company is said to be actively manufacturing electric refrigerators, an ERN questionnaire on specifications sent in July, 1934, indicated that they were no longer actively manufacturing household electric refrigerators and did not intend to do so during 1934.

Rice Products, Inc.
Executive offices: 100 E. 42nd St., New York City; factory: 315 Beaubien St., Detroit, Mich.

One of the first refrigerating machines to deviate from sulphur dioxide and ethyl chloride which were most common in household refrigeration 10 or 12 years ago, the Rice machine used methyl chloride.

Original development work on the machine was conducted by Isaac L. Rice, Sr., deceased. He had previously been president of Kelly-Springfield Tire Co., Electric Boat Co., Electric Storage Battery Co., and the Casein Co. of America.

Leading figure in the Rice management was I. L. Rice, Jr., president of the company. Other officers (Feb. 2, 1927, ERN): T. E. Carpenter, v. p. & gen. mgr.; Julian Rice, secy.; R. B. Wells, sales mgr.; J. B. Frazier, adv. mgr.; and Frank West, chief engr.

First machines were for commercial use, and employed reciprocating compressors of conventional design. Later household refrigerators were developed. These, too, were reciprocating, used methyl chloride, Mercoid thermostats, and a capillary tube expansion system. The Rice system, incidentally, is generally recognized as the first to use a capillary tube. At one time the Rice machine was used extensively for marine refrigeration.

Reported in the March 11, 1931, issue of ERN, the Rice receivership wound up its large-scale manufacturing activities in Detroit, but Maxwell Reid, who had been connected with Rice Products, Inc., as a distributor, made arrangements to adopt the Rice name and moved certain equipment east where he established Rice Electric Refrigeration, Inc., 36 Flatbush Ave., Brooklyn, N. Y.

This company was incorporated Jan. 3, 1931 (New York), with these officers: Reid, pres.; H. H. Weil, secy.-treas. Directors: Officers, E. W. Young, and Elizabeth Lang.

In 1932 the company had a contract with F.A.D. Andrea, large radio manufacturer of Long Island City, N. Y., but the latter went out of the refrigeration business the following year.

New York Edison Co. Boosts Air Cooling With Mailing Pieces

NEW YORK CITY—Air-conditioning promotion in the form of mailing pieces designed to awaken the interest of proprietors of commercial establishments is being distributed in the metropolitan area by the New York Edison Co. and the United Electric Light & Power Co.

Each mailing piece advises the reader that the utility has nothing to sell but that it stands ready to give free, expert advice on the various types of air-conditioning equipment now available, how quickly it could be installed, and how much it would cost.

A business reply envelope pasted onto each piece makes the matter of summoning this expert an easy task. Three promotion pieces have been prepared for the restaurant market, and one for barber shops and beauty parlors.

Says the cover on one folder "He thought he wasn't hungry—but this is what he ate!" the bill of fare showing a \$1.35 total for lunch. A list of prominent restaurants, stores, and movies that are air conditioned are included in this folder with the caption "if conditioned air pays these places it will pay you too."

Copy theme explains that air conditioning is a year 'round proposition and that no tea room is too small or restaurant too large to be equipped.

Another mailing piece sent to restaurants pictures two men debating the question "where shall we eat?" and finally hitting happily upon an air-conditioned establishment. Copy theme is the same.

Third restaurant piece is devoted principally to illustrations of well-known metropolitan eating establishments that have been air conditioned. "Cartoon" copy pointing out how air conditioning brings added profits features the mailing piece sent to barber shop and beauty parlor proprietors. The invitation to get free, expert advice is included in this folder also.

Cost of Cooling Theater Averages \$5.61 Daily

BALTIMORE—Cost of cooling the Hampden Theater here from July 10 to Oct. 4 last year averaged \$5.61 per day, according to a report of a study recently released by the Consolidated Gas, Electric Light and Power Co. of Baltimore.

The theater is equipped with Frick refrigeration and air-conditioning equipment. Equipment installed requiring electric current included one 40-hp. compressor motor, one 7½-hp. fan motor, and one 3-hp. pump motor. The theater has a capacity of 800 people. Total operating cost for the period was \$487.75, or an average of \$5.61 per day.

Trane Units Will Condition Oil Firm's Laboratory

LA CROSSE, Wis.—An order for year-round air-conditioning equipment for the White Oil Laboratory of the Atlantic Refining Co. of Philadelphia, has just been placed with the Trane Co. here. Compressors will be furnished by Mack Machine Co. of Philadelphia.

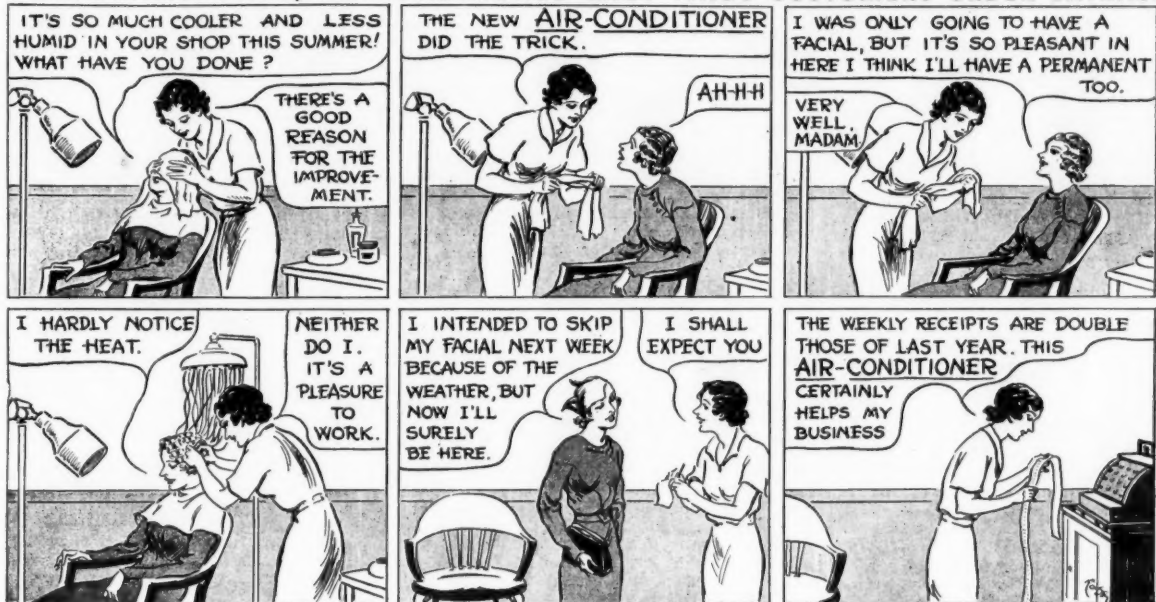
New Department Store in Tunis Installs System

TUNIS, Tunisia—First air-conditioning system to be used in this city was installed recently by a newly opened department store, according to American Consul Lawrence S. Armstrong.

The equipment includes a 100-hp. ammonia compressor, and 80,000-liter water tank, 1,350 water sprays, and a 28-hp. ventilator with a capacity of 100 cubic meters per hour. Installation was made by the Maison Sulzer of Paris.

Visualizing the Benefits of Air Conditioning to Commercial Prospects

COMFORTABLY COOL, AIR-CONDITIONED SHOP FINDS CUSTOMERS ORDER EXTRAS!



COMFORTABLE CUSTOMERS HAVE MORE WORK DONE AND PAY LARGER BILLS GLADLY!



BEAUTY PARLORS

AIR CONDITIONING makes your shop a haven of refuge from oppressive heat. It is a paying investment for Beauty Parlors—people just naturally stay to have more work done.

Air Conditioning COOLS

DEHUMIDIFIES and

CIRCULATES the air so efficiently that hot air

dryers, permanent waving machines and hot water are unable to make your shop uncomfortable. A telephone call to your electric company or your name on the enclosed postcard will bring an expert in air conditioning who will be glad to answer any questions you have regarding the application of air conditioning to your shop. The service is free and does not obligate you in any way.

BARBER SHOPS

They take the "whole works" and feel great about it when your Barber Shop is AIR CONDITIONED.

Air Conditioning COOLS

DEHUMIDIFIES and

CIRCULATES the air. It is a paying investment.

A telephone call to your electric company will bring an expert in air conditioning who will be glad to answer any questions you have regarding the application of air conditioning to your shop—or fill in and drop this return card in the mail box. The service is free and does not obligate you in any way.

THE NEW YORK EDISON COMPANY
THE UNITED ELECTRIC LIGHT AND POWER COMPANY
4 IRVING PLACE - NEW YORK, N. Y.

York Air Conditions Research Room to Simulate Stratosphere Conditions

YORK, Pa. — A specially designed room is being constructed by the York Ice Machinery Corp. here for U. S. Naval Research Laboratory at Bellevue, D. C., to simulate by the use of air-conditioning equipment and insulated floors, walls and ceiling, the atmospheric conditions encountered during high altitude flights, and in penetrating the stratosphere to study the problems of radio communication at extremely low temperatures and greatly reduced atmospheric pressures.

The test room itself will consist of an air-tight, completely insulated vault, measuring 15 by 20 by 10 ft., and will be equipped with an air-conditioning system by which it will be possible to maintain within the room any desired level of temperature between 50° below zero and 150° above zero, F.

Humidity Controlled

Control of humidity will be provided, together with evacuating equipment, so that desired atmospheric conditions or low pressures in extremely high altitudes, even to one-half an atmosphere, can be duplicated within the room.

In order to create an artificial atmosphere within the room, for the testing of sensitive radio instruments under a wide range of temperature and humidity variations, apparatus is being installed which will permit control of temperature levels between minus 30° F. and 150° F., and for regulating relative humidity when the room temperature is between 50° F. and 100° F.

Barometric pressures may be re-

duced down to 14 in. of mercury absolute, when temperatures between 50° F. and minus 30° F. are produced.

Equipment to be Installed

The York refrigerating equipment that is being installed to produce these conditions within the room consists of:

Two 5 by 5-in. single-acting vertical ammonia compressors.

One 16 by 12-ft. 6-in. shell-and-tube condenser.

One spray-type air conditioner.

One coil-type air-conditioner unit.

The air-conditioning units are to be located directly in the test room, while the compressors will be located outside the room. The apparatus will be inter-connected so that either or both of the compressors may be operated in compound compression with the use of suitable inter-cooling equipment.

Both compressors will have variable speed motors to permit extreme flexibility of operation and to give proper balance when operated in compound compression.

Doors, Floors, Walls, and Ceiling

A special 3-in. bitumastic mixture will be used in the construction of the room to withstand the effect of temperatures and humidities. This material is to be covered with tongued and grooved grade A 25/32-in. cypress flooring, bedded in asphalt, and finished with two coats of spar finish.

All doors can be closed and sealed to become air-tight, and are capable of withstanding a 16-in. vacuum within the room. Quadruple plate glass windows are being provided to facilitate the study and observation of instruments within the room.

The two inner panes of these windows are ¼-in. thick, and the two outer panes ½-in. thick. The panes will be set in rubber channels, and special provision is being made to prevent moisture from accumulating on the glass, and to insure clear vision at all times.

Air Lock Entrance

Access to this unique test room will be through a specially constructed air lock, which in principle will be the reverse of the typical air lock design employed on projects involving the use of compressed air.

It is estimated that when the construction is completed and the equipment completely installed, the total cost of building this test room will be in excess of \$23,000.

Through the use of this special test room it will no longer be necessary to penetrate the stratosphere or to soar to great heights in order to ob-

serve the action of radio signals under conditions of extreme cold and low pressure, since these conditions can be established within this room at will, thus making possible a closer and more accurate study of radio communication under extreme, as well as normal conditions.

New Chicago Distributor For Timken Appointed

CHICAGO—Distribution of Timken oil heating equipment in the Chicago area has been taken over by the Automatic Oil Heating Co., with headquarters at 184 N. LaSalle St., here, quarters at 184 N. LaSalle St., here, according to Walter E. Gustavson, president of the distributorship.

Utility Converts Bus Into Show Car

WASHINGTON, Iowa—Latest ways to demonstrate electric refrigerators is to exhibit them in a bus, this stunt being carried out by the Iowa Southern Utilities Co., Westinghouse distributor.

F. B. Miller, district manager for the utility, recently bought a passenger bus, had the seat removed, installed complete wiring facilities, and had the bus enameled in ivory.

Electric refrigerators and other appliances are loaded onto the bus which is then driven to surrounding towns for display purposes, where actual demonstrations are made to selected groups.

OLE O LAY EO

STURDY and SLIPLESS

... We mean Gilmer refrigerator belts. They're built to fit. They're noiseless. They're the belts for you to handle. Each belt sleeved and marked for easy identification. Write NOW for folder, JS-94, that covers complete line of belts for all makes and models.

L. H. GILMER COMPANY, Tacony, Phila., Pa.

Gilmer
Makers of the World's Best-Known V-Belts

Specialists in quality belts since 1903

The First Curtis Unit Built in 1922 Still Operates Today

1922

1923

1924

1925

1926

1927

1928

1929

1930

1931

1932

1933

1934

CURTIS

Refrigerating Machine Co.

Division of Curtis Manufacturing Co.

1912 Kienlen Ave., St. Louis, U.S.A.

518 H Hudson Terminal, New York City.

80 Years of Manufacturing Experience

40 Years of Compressor Building

12 Years' Experience in Producing Refrigerating Units

Watch! for an interesting Curtis announcement to be made shortly in this publication.

1/2 to 2 h.p. air cooled

3/4 to 5 h.p. water cooled

Some desirable territories still open for reliable distributors. Write for details.

CORPORATE HISTORY-Continued

(Continued from Page 16, Column 5)

Drake, secy.-treas. & sales mgr.; W. P. Davis, sales prom. & serv. mgr.; James Warren, works mgr.; C. A. Xardell, chief engr.

According to ERN (May 25, 1927), company manufactured complete commercial refrigeration units, commercial refrigerators, ice cream cabinets, condensers, and expansion coils.

Reciprocating compressors using ammonia as refrigerant and thermostatic control were driven by 2 and 3-hp. motors, with 1 and 2-ton capacities.

Romeson Mfg. Corp.

Previously: First National Bank Bldg., Fifth Ave. and Wood St., Pittsburgh, Pa. Last known address: Titusville, Pa. Chartered June 17, 1929, (Pa.).

Officers (July 30, 1929): Griffith Robinson, pres.; G. I. Morris, v. p. & gen. mgr.; B. E. Kraft, Jr., treas.; D. W. Campbell, asst. treas.; G. W. Kilpatrick, secy. Directors: H. A. May, Gray Morris, E. S. Hoops, (Beaver Falls), M. M. Grubbs, Griffith Robinson, (Pittsburgh), Harry Stambaugh, (Pittsburgh), G. W. Kilpatrick, J. H. Shide, E. F. Kraft, Jr., J. M. Pennell, L. B. Carter, S. S. Bryan, and John Fehrenbach.

The Keystone Refrigerating Corp., formerly of Beaver Falls, Pa., was merged with this new corporation, plant and equipment being moved to Titusville, Pa., taking over plant formerly owned by American Radiator Co.

Keystone Refrigerating Corp. had been incorporated July 1926, (Delaware), as a reorganization of an enterprise originally known as Frigidor Corp.

Griffith Robinson had been a consulting engineer in Pittsburgh for several years.

Manufactured commercial units of 1/2 to 1 ton capacity. Compressor was rotary type with direct drive. Flooded or dry system. Temperature control. Used Wagner motors. (Dec. 18, 1929, ERN.) Trade name: "Romeson Romec."

A news item from Titusville, Pa., reported that a bill in equity had been filed in Crawford County Court requesting a receivership.

Rotax Co., Inc.

380 East 133rd St., New York City.

Incorporated March, 1916 (New York). Succeeded to the business previously conducted by Rose Truex Co., Inc., which was started in 1914 (New York), and assigned to Douglas E. Greene (Feb. 1, 1916). On Feb. 3 involuntary petition in bankruptcy was filed against the Rose Truex Co. by Duplex Filter Systems, Inc.

Numerous changes in personnel since the formation of the corporation. From 1916 to 1919, officers were: Samuel Raymond, pres.; Wm. J. Atwood, v. p. & mgr.; Samuel Kraft, secy.-treas. Later officers were: Wm. J. Atwood, pres.; Wm. Schatz, secy.-treas.

The company had one subsidiary, Hartford Engineering & Machine Co. controlling 60 per cent of the stock (See Hartford).

Rotax Co., Inc., manufactured various kinds of refrigeration devices, principally used in soda fountains and also manufactured various parts for water filter systems. It also handled flavors for the confectionery trade.

In a report of June 8, 1934, Wm. J. Atwood said that the company was still in business.

Rotorite Corporation

Present address: 141 West Jackson Blvd., Chicago.

Chartered Feb. 11, 1927, (Ill.), as Zero Aire Corp.

Acquired assets of California Refrigerator Mfg. Co. Name changed to Rotorite Corp. March 6, 1928.

Officers (1934): J. H. Denney, pres.; C. W. Johnson, secy. & treas. Directors: Officers and W. A. Carson, Denney resides in Evansville, Ind., where he is chief engineer of Sunbeam Electric Mfg. Co. (1934 Refrigeration Directory). Johnson was a patent attorney, connected with Williams, Bradbury, McCaleb and Hinkel for several years. Carson is president of Sunbeam Electric Mfg. Co.

Business organized to be an operating concern but has actually operated as merely the owner of certain patents, designs, and contracts. Contracts are said to be with Sunbeam.

On Aug. 21, 1934, Johnson stated that the corporation possessed no resources of a tangible nature and had numerous patents, designs, and contracts, most all of which were used by Sunbeam.

Royal Refrigerator Co., Inc.

Last known address: 131 North 14th St., Brooklyn, N. Y.

Incorporated Dec. 16, 1925, (New York).

Incorporators were: Herman Spector, Jacob Bradelowitz, and Louis Stakoff. Original officers: Herman Spector, pres.; Herman Bromberg, v. p.; Louis Kutoff, treas.; Louis Stakoff, secy.

In November, 1926, Kutoff withdrew. Bromberg became treasurer.

In May, 1928, Bromberg withdrew and Ralph Jasse succeeded him as secretary.

Spector was formerly employed as a salesman for the United States Refrigerator Co., Inc. Jasse had formerly been a high school teacher in New Jersey.

Manufactured porcelain refrigerators, ironing board cabinets, and breakfast sets, according to a report of Nov. 26, 1929.

In January, 1930, changed name to Royal Woodcraft, Inc.

The company operated at 131 North 14th St., Brooklyn, until July 23, 1930, when they moved to temporary quarters at 2 Franklin St., Brooklyn, as result of a bad fire, and so far as can be learned never resumed business.

Sanat Refrigerating Co., Inc.

Last known address: 331 Madison Ave., Room 1208, New York City.

Organized Feb. 6, 1925 (New Jersey), in Camden, N. J.

According to the May 25, 1927, ERN gives following officers: P. H. Buch, pres. & gen. mgr.; J. E. Ericson, H. M. Groff, secy.; I. B. Black, treas.; J. E. Coulthurst, serv. mgr.

Directors: Officers and J. I. Strathagen, C. A. McKinney, John S. Coulthurst, T. Percy.

Manufactured electric refrigerator (May 25, 1927, ERN), invented by Buch Groff

Co. and turned over to Sanat Refrigerating Co., Inc., which held the patent. Seeger and Gurney cabinets were used (Feb. 16, 1927).

That summer (1927) Sanat Refrigerating Co., Inc., filed a voluntary petition in bankruptcy, and on Aug. 6, 1927, Isaac Siegel was appointed receiver in bankruptcy.

Sanitice Corp.

Last known address: 60 East 42nd St., New York, N. Y.

Organized March 15, 1924 (New York).

Officers (May 14, 1932): F. T. Sanford, pres.; E. R. Foote, treas.; Katherine L. Sharp, asst. secy. Directors: C. L. Barton, E. R. Foote, John Gans, F. T. Sanford, S. T. Strong.

Sanford was with United Automobile Co. for a time and in February, 1922, organized the Sanford Automobile Co., Inc., became president of it, the company being dormant for several years now. He was also vice president of International Industrial Corp., and vice president of American Foreign Corp., resigning from the latter corporation 1928.

Public press announcement was made Dec. 18, 1931, that Sidney Solomon, city marshal, would sell effects of Sanitice Corp. to satisfy judgment in favor of Sara Konblo. A plant formerly owned by the corporation at 132 Water St., Norwalk, Conn., was sold by foreclosure of a mortgage April, 1932.

The company had manufactured electric refrigerators, specializing in furnishing new apartment houses. Principal parts were manufactured by others. Sanitice assembling complete refrigerators.

A report dated July 15, 1933, stated that company maintained an office at 60 East 42nd St. until Sept. 13, 1932, when they moved, leaving no forwarding address.

Savage Arms Corp.

Turner St., Utica, N. Y.

Executive offices: 100 East 42nd St., New York City.

Established by Arthur W. Savage, inventor of the Savage rifle, being originally incorporated as Savage Repeating Arms Co., April 10, 1894. In December, 1897 was reincorporated under New York laws as Savage Arms Co. In 1915 business was sold outright to Driggs-Seabury Ordnance Co. of Sharon, Pa. In August, 1915 was reincorporated as the Driggs-Seabury Corp. under Delaware laws, but on June 1, 1917, the corporate style of the Savage Arms Corp. was adopted.

Officers (Feb. 2, 1927 ERN): W. L. Wright, pres.; F. H. Phillips, v. p.; J. H. Cook, secy.; E. A. MacDonald, treas.; F. B. Ruoff, sales mgr. of ref. div.; R. B. Woolley, adv. mgr.; R. W. Ayres, chief engr., ref. div.; E. T. Russell, prod. mgr.; C. A. Baldwin, serv. mgr.; J. G. De Remer, consulting engineer. According to ERN, May 25, 1927, F. M. Hickey was listed as sales mgr. and W. L. Howlett, serv. mgr. F. B. Ruoff was omitted as sales mgr. of ref. div. C. A. Baldwin, was listed as mgr. of ref. div.

The company manufactures all types of sporting fire arms, machine guns, ammunition and also electric washing machines, unit air conditioners, electric irons, and exercising machines.

According to the Nov. 23, 1927 ERN, the company entered the refrigeration business about 1927, manufacturing ice cream cabinets. A mercury-helix type friction drive compressor of hermetic type was employed, using methyl chloride as refrigerant and units were equipped with thermostatic control, 1/7 to 1/4-hp. motors being used, compressor had no internal moving parts and no oil in contact with refrigerant. The company manufactured special cabinets for food markets and electric refrigeration equipment for ice cream and soda fountain use. Reports indicate that Savage is abandoning the ice cream cabinet field. However it recently acquired the "Zephyr" refrigerated air conditioner.

Sharples Separator Co., West Chester, Pa.

Incorporated Feb. 25, 1905, (Penn.).

Aug. 10, 1925, Sharples Separator Co. and Sharples Centrifugal Co. were merged.

Officers (1924): F. F. Wood, pres.; Miss A. M. Fitzpatrick, secy.-treas. F. M. Sharples appeared as a director. The company operated with success for several years but later its financial affairs became involved.

On April 20, 1933, Wood and D. R. Scott were appointed receivers.

On May 25, 1934 Sharples Separator Co. by decree of Chester County Court under date of April 20, 1933, was ordered liquidated. Practically all buildings and personal property have been sold, several buildings remaining.

According to Nov. 9, 1927 ERN, they made the Allison units for Domestic Electric Refrigerator Corp. and also did complete assembling for Allison refrigerators at West Chester. Esco Cabinet Co. has recently made a bid for certain properties of Sharples Separator Co.

Siberian—see Armstrong Machinery.

Snow Queen—see Hvid.

Socond Refrigerator Corp.

Last known address: 117 Stewart St., Lynn, Mass.

Incorporated April 15, 1925, (Mass.).

C. K. Tripp and R. D. Ramsdell were formerly president and treasurer, respectively. Officers (May 5, 1926) after company was reorganized: L. F. Atherton, pres.; A. E. Best, v. p. & gen. mgr.; C. H. Nevons, secy.-treas. Directors: Atherton, Best, T. W. Pelham, C. N. Smith, R. A. Ballou, and E. J. Driscoll.

Officers were made according to (May 25, 1927 ERN). Personnel included R. H. Booth, sales & adv. mgr.; A. C. Macintosh, chief engr.; C. A. Batchelder, pur. agt.; Clifford Porter, serv. mgr.

Plant was located on third floor of Campbell Electrical Mfg. Co. building. It was reported May 21, 1927 that several of their machines had become defective and caused company to lose money.

Involuntary petition in bankruptcy was filed against company by Seco Lowell Shop, Robert Groom Co., and Chase Parker & Co., Oct. 19, 1927.

H. B. Snelling was appointed receiver in bankruptcy, Oct. 25, 1927, and reported May 19, 1928 that attempts to sell business to a going concern had not been successful. On Jan. 28, 1929 it was re-

ported that practically all of the assets of the Socond Refrigerator Corp. had been disposed of and they would vacate the premises Feb. 1, 1929.

According to May 25, 1927 ERN, the company manufactured household electric refrigerators, pumps, and compressors using the trade name Socond.

Socond used SO₂ in a two-cylinder compressor driven by a 1/4-hp. Leland motor. Belt drive, brine tank. Machine installed below the food compartment.

Spokane—see Armstrong Machinery.

Stacold Refrigerating & Manufacturing Co.

Last known address: 138 W. 17th St., Los Angeles, Calif.

Incorporated May 17, 1923, (Calif.), as Fordarcic Refrigeration Co.

Officers (July 2, 1923): E. T. Ford, pres.; C. T. Webel, v. p.; W. P. Bishop, secy.-treas. Directors: R. G. Ford, Harry Evans, and others.

E. T. Ford devoted his time for several years to development of small ice-making machine.

Stacold units used SO₂, thermostatic control, and were water cooled. Compressors were direct-driven, rotary, and furnished up to 350 lbs. of ice-melting effect per day.

He also organized Ford Electric Mfg. Co., Ford-Oliver Electrical Mfg. Co., and Superior Equipment Co.

A Mathews Pacific Co. of Sandusky, Ohio, opened a branch in Los Angeles at above address and planned to act as distributor of refrigerators.

On April 19, 1932 Stacold Co. was reported out of business.

Will P. Stevens

Present address: 1632 Long Beach Blvd., Los Angeles, Calif.

Stevens came to Los Angeles in 1900 and for three years was chief engineer of Los Angeles Ice & Cold Storage Co. Started own business in 1905 as manufacturer, July 13, 1923 suffered fire loss estimated at \$180,000 in which he carried only \$10,000 insurance. Reengaged in business on a reduced scale.

He has been doing only general electric refrigeration repair work for past three years. He has well-equipped shop from his former manufacturing activities.

Stroh Products Co.

Present address: 909 E. Elizabeth St., Detroit, Mich.

Incorporated Feb. 23, 1909 (Arizona), succeeding West Virginia corporation organized in 1902 as the Stroh Brewing Co., changing to present name after repeal of Volstead Act. Business originally established 1850 by Bernard Stroh, having continuous operating records since that time. Has a wholly owned subsidiary, Stroh Brewery Co.

Officers (1934): Julius Stroh, pres.; C. F. Raiss, v. p. & treas.; G. M. Stroh, v. p.; John W. Stroh, secy. Directors: Officers and Hattie M. (Mrs. Julius) Stroh.

Stroh Products Co. and its subsidiary manufacture beer, ice, and ice cream and operate extensive real estate holdings.

In 1923, the company entered the electric refrigeration business, the Stroh family furnishing the capital. The machine used was designed by W. G. Roloff, and was made in commercial sizes only. The motor was 1/2 hp.

The compressor was of rotary type, belt-driven. Both methyl chloride and sulphur dioxide machines were made, using a low-side float control. Century motors were mainly used. Approximate production ranged between 400 and 500 machines.

The company still has the manufacturing equipment for making refrigerating machines and the company still makes and furnishes service parts. Officials connected with the refrigeration end of the business were as follows: G. M. Stroh, a first v. p.; and Richard Jordan, in charge of refrigeration manufacturing.

The company went out of the electric refrigeration business in 1928. Machines were chiefly made for the company's own use, many still being used in the plant.

Summerheat Corp. of America

Last known address: Dowagiac, Mich.

Incorporated Dec. 9, 1927, (Del.). Succeeded oil burner division of Beckwith Co. of Dowagiac.

Officers and directors (April 4, 1933): G. A. Culp, Jr., pres. & mgr.; B. C. Culp, v. p.; Fay Darling, secy.-treas. From Sept. 1, 1924 until Aug. 1, 1927, Culp was engaged in development of Summerheat devices, during which time he organized oil burner division of the Beckwith Co. and through an exclusive manufacturing contract produced the Summerheat devices. Finally he disposed of that division of the Beckwith company through the medium of contracts and waived the accrued royalties on Electromatic Appliance Corp. of Hamilton, Mo., which was a holding company controlling patents of Summerheat oil burner. Culp controlled this company through a majority of stock ownership.

In January, 1931, company acquired electric refrigeration division of American Foundry Equipment Co. of Mishawaka, Ind.

Company manufactured and sold to distributors a commercial refrigeration unit known as "American Ace." The refrigeration unit had been developed by American Foundry and Equipment Co. of Mishawaka.

The machine was fully enclosed in solid housing, self oiling, and fully automatic hermetically sealed.

According to a report dated Aug. 17, 1934, the business of Summerheat Corp. of America was sold out by City of Dowagiac, Mich., for personal taxes.

Super Oil Heater Sales Co.

Present address: 613 Connecticut Blvd., East Hartford, Conn.

Incorporated 1926 (Conn.) as Roberts Motors, Inc. Name was changed to the above Sept. 10, 1927 and automobile line discontinued.

Began selling oil heaters which were manufactured by Super Oil Heater Co., Inc., Hartford, Conn. Plant of this company later moved to Pawtucket, R. I. and later went out of business. Heaters were then purchased from Johnson Mfg. Co. of Pawtucket, R. I.

Entered the electric refrigeration field in September, 1930, with three household models, using Seeger cabinets. Also had three models of water coolers 3, 3 1/2, and 6 gallons per hour. Three gallon size

was a bottle cooler and the others were pressure type. Refrigerator trade name: "Super Ice Man."

Officers (1933): H. B. Roberts, pres.; W. C. Sawyer, v. p.; D. B. Roberts, treas.; L. J. Balschick, treas. Directors: Officers and Charles Betz.

The company had a large sales room at above address handling oil burners and electric refrigerators. On May 9, 1934, it was reported that company was still doing business in the oil burner field.

Superior Iceless Refrigerator, Inc.

Offices: Hanna Blvd., Cleveland, Ohio. Factory: Canton, Ohio.

Incorporated in October, 1926 (Ohio), when the plant of the Couzens Ice Machine Co. at Wapakoneta, Ohio, was purchased. Later the plant equipment was moved to Canton and a property of the Timken Roller Bearing Co. purchased on land contract.

Officers (March 2, 1927, ERN): C. A. Kolp, pres.; E. L. Frantz, exec. v. p.; V. F. Carroll, v. p. in chg. of sales; E. E. Quirk, secy.; M. J. Murphy, treas.; W. F. Marr, sales mgr.; C. E. Yates, sales engr.; G. L. Miller, works mgr.; and J. E. Massey, prod. mgr. Officers, with Van Rennsaler H. Greene of New York City composed the directorate.

Manufactured household refrigerators, ice cream and soda fountain cabinets, water coolers, etc. with SO₂ reciprocating compressors driven by 1/2 and 3/4-hp.

motors, thermostatically controlled. Rex cabinets were used in 1926 and 1927.

In December, 1928, an involuntary petition of bankruptcy was filed, and shortly after that a creditors' committee was formed. This included J. T. McKinney of Rex Mfg. Co., O. M. Lam of Dayfan Electric, and O. H. Hinkel of Ranco.

On May 31, 1931, it was announced that three former stockholders had purchased the business from the receiver for \$3,000 and operated the business for a short time before discontinuing it. Canton property reverted to Timken.

Tennessee Furniture Corp.

343 West Place, Chattanooga, Tenn.

Organized Dec. 20, 1919, (Tenn.). Result of consolidation of Odorless Refrigerator Co., Loomis and Hart Furniture Co., and Acme Kitchen Furniture Co., all of Chattanooga, and North Star Refrigerator Co. of Richmond, Ind. Before this consolidation, the four merged companies had been controlled by the same stockholders.

Officers (1933): E. Y. Chapin, chairman of board; G. T. Raoul, pres. & gen. mgr.; R. T. Frazier, v. p.; J. H. Lane, v. p.; H. C. Arnold, secy. & treas. Directors: E. Y. Chapin, J. J. Mahoney, Z. C. Patten, F. L. Probasco, L. H. Caldwell, T. N. Van Dyke, and G. T. Raoul. Chapin also president of American Trust and Banking Co. of Chattanooga, secy. of United Hosiery

(Concluded on Page 20, Column 1)

BUYER'S GUIDE

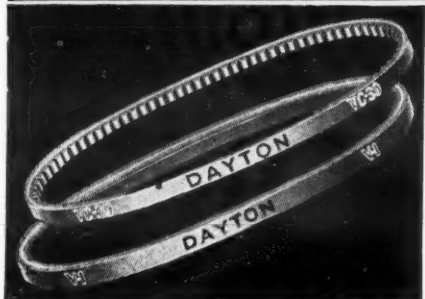
MANUFACTURERS SPECIALIZING IN SERVICE TO THE REFRIGERATION INDUSTRY

SPECIAL ADVERTISING RATE (this column only)—\$12.00 per space.

Payment is required monthly in advance to obtain this special low rate.

Minimum Contract for this column—13 insertions in consecutive issues.

DAYTON V-BELTS



There is a Dayton V-Belt for all makes and types of refrigerators. A stock is available near you. Send for price list and name of your nearest distributor.

THE DAYTON RUBBER MFG. CO.

DAYTON, OHIO

The world's largest manufacturer of V-Belts

A NEW COMPACT VALVE

Model 73-R Solenoid Valve, built to meet the exacting demands of the Refrigeration and Air Conditioning Industry. Drop forged body—heavy stamped cover, crackle finish. Easily installed, small and neat in appearance. Impact type plunger. For use with Freon, Methyl Chloride and similar installations. Can also be supplied for the control of water. Working pressure 200 lbs. 5/32" port. Write for details.

AUTOMATIC PRODUCTS CO.

121 N. Broadway

Milwaukee, Wis.

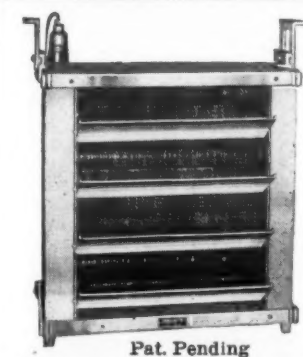
POSITIVE COLD CONTROL • FOAM CONTROL • AUTOMATIC CONTROL • SAFE • FLEXIBLE • ECONOMICAL

Sell this big aid to Better Business

Dispensers who serve their beer at exactly the desired temperature at all times are getting the bulk of the business these days. Because it enables them to dispense beer in any quantity, at any set temperature, the Radial Dual Control Beer Cooler materially aids dispensers in building up a profitable patronage. Push the Radial Dual Controlled Beer Cooler now—you'll find your prospects enthusiastic over its remarkable advantages. Write today.

COMMERCIAL COIL & REFRIGERATION CO.
455 N. Artesian Ave., CHICAGO

INSTANTANEOUS INDIRECT COOLING • WIDE CAPACITY RANGE • COMPACT



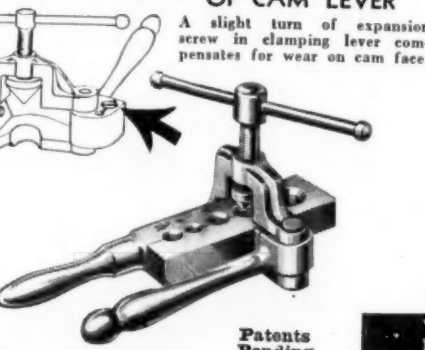
COOL-RITE

Unit Cooler with exclusive HUMIDITY RESERVOIRS

The definite scientific contribution to the industry—tens of thousands of humidifier cups in each unit—actually produce high constant relative humidity. Third year of proven success, due to correct capacities, quality and results. For Walk-ins & Display Cases—9 models & sizes.

COOL-RITE PRODUCTS CORP.
79-85 Willow St. New Haven, Conn.

NOTE EXPANSION SCREW IN HEAD OF CAM LEVER



HENRY Flaring Tool

Speedy and rugged. Has carbonized hardened clamping blocks. Adjustable cam lever exerts greatest pressure opposite tube. For 1/4, 5/16, 3/8, 1/2 and 5/8-in. tubing.

HENRY VALVE CO.

Specialized Valves & Fittings for Refrigeration
1001-19 N. Spaulding Ave., Chicago

WRITE FOR BULLETINS DESCRIBING HENRY REFRIGERATION SPECIALTIES

CLASSIFIED

RATES: Fifty words or less, one insertion \$2.00, additional words four cents each. Three insertions \$5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

POSITIONS WANTED

MECHANICAL ENGINEER with nine years' experience as Engineer, Assistant Chief Inspector and Production Manager, and Chief Inspector of two companies wishes connection in going concern. Box 638.

Address reply to Electric Refrigeration News, 5229 Cass Ave., Detroit, Mich.

Trained Men Available

When in need of practical, trained shop mechanics, installation or service men, patronize this FREE Placement Bureau. We have competent, trained graduates available in every locality, to meet your requirements. With or without experience. No charge to the men or to you. Write, phone or wire.

Utilities Engineering Institute

Placement Division
Wells at Kinzie Street, Chicago

N.J. Public Service Co. Plans Electrolux Drive

NEWARK—An Electrolux sales campaign to run until Dec. 8 has been inaugurated by the Public Service Electric & Gas Co. of this city, and is called the "Christmas Savings Fund Campaign."

The plan calls for a quota of 1,500 Electrolux for the entire organization. Each outside salesman's quota is 12 units, and each floor representative has a quota of eight. Each salesman who reaches his quota receives a bonus of \$1.50 per installation. If he exceeds his quota, he will receive a bonus of \$2 per installation.

A special prize will be presented to the representative in each of the six divisions of the utility who obtains the largest number of Electrolux installations. To qualify for this prize the salesman must have at least 12 installations to his credit.

In addition, there is a bonus for each team leader whose team reaches its quota, and there are prizes for individuals and team leaders turning in the highest number of installations.

QUESTIONS

Prices on Service Parts

No. 1831 (Service Man, New York)—"I am desirous of obtaining list prices, discount lists, and any and all data necessary or helpful to one entering the refrigeration parts supply business."

"The business would be local in character. Any information or help you may advance would be most gratefully received."

Answer: Manufacturers of all refrigeration parts may be found in the 1934 REFRIGERATION DIRECTORY. List prices and discount lists may be obtained by writing to manufacturers listed in the DIRECTORY.

Melchior, Armstrong, Dessau Co., 300 Fourth Ave., New York City, refrigerator parts jobber, has a catalog which gives prices on parts and accessories for household and commercial refrigerating units.

American Manufacturers

No. 1832 (Manufacturer, Paris, France)—"Who are the American manufacturers who export?"

"(1) Kerosene and gasoline household refrigerators?"

"(2) Little electric household refrigerators?"

"(3) Cold storage refrigerating apparatus?"

"(4) Refrigerators for green vegetables?"

"(5) Refrigerators for flowers?"

Answer: (1) Manufacturers of kerosene-operated and gasoline-operated refrigerators are listed on page 274 of the 1934 REFRIGERATION DIRECTORY. Not listed in the DIRECTORY is the Waukesha Motor Co. of Waukesha, Wis., which has recently introduced a gasoline-operated refrigerator.

(2) By manufacturers of "little" household electric refrigerators we presume you mean the new small models introduced by the manufacturers for the appliance selling program inaugurated by the Tennessee Valley Authority. Manufacturers of such units include: Crosley Radio

Corp., Cincinnati, Ohio; Frigidaire Corp., Dayton, Ohio; General Electric Co., Nela Park, Cleveland, Ohio; Kelvinator Corp., 14250 Plymouth Rd., Detroit, Mich.; Leonard Refrigerator Co., 14260 Plymouth Rd., Detroit, Mich.; Norge Corp., 670 E. Woodbridge, Detroit, Mich.; Westinghouse Electric & Mfg. Co., Mansfield, Ohio. Stewart-Warner Corp., 1826 Diversey Parkway, Chicago, Ill., has also recently introduced a small (2 cu. ft. capacity) refrigerator, although not specifically designed for the Tennessee Valley market.

(3) Manufacturers of cold storage refrigerating apparatus are listed starting on page 275 of the 1934 REFRIGERATION DIRECTORY.

(4) Manufacturers of commercial refrigerators for green vegetables are listed starting on page 281 of the 1934 REFRIGERATION DIRECTORY.

(5) Manufacturers of refrigerators for flowers are listed starting on page 286 of the 1934 REFRIGERATION DIRECTORY.

Brine Agitators

No. 1833 (Dealer, Illinois)—"Will you kindly send us a list of manufacturers of brine agitators for use in making bulk ice in quantities of from 300 to 1,000 lbs."

"We find lists of manufacturers making brine agitators but this is not what we mean. We don't want a brine circulating pump but simply an agitator to put into the brine compartment of the ice machine."

Answer: Try Baker Ice Machine Co., 1518 Evans St., Omaha, Neb.; Carbondale Machine Co., Carbondale, Pa.; Frick Co., Waynesboro, Pa.; General Refrigerating Sales Co., Beloit, Wis.; Reliance Refrigerating Machine Co., Inc., 3401 N. Kedzie Ave., Chicago, Ill.; Vilter Mfg. Co., 2234 S. First St., Milwaukee, Wis., and York Ice Machinery Corp., York, Pa.

These firms are manufacturers of ice-making apparatus and can probably tell you where to obtain brine agitators if they do not make them.

Resume of Liens

No. 1834 (Manufacturer, Illinois)—"Sometime last year you published a chart showing a resume of Title Retaining and Personal Property Lien Instruments used in the United States

for Retail Instalment Sales. Can you still supply copies of this?"

"Whatever the cost is we will be glad to pay for it and will appreciate your courtesy in supplying us with this chart."

Answer: The resume of Title Retaining and Personal Property Lien Instruments used in the United States for Retail Instalment Sales was published in the Feb. 8, 1933, issue of ELECTRIC REFRIGERATION NEWS. Copies of this issue may be obtained at a cost of 10 cents each by addressing Business News Publishing Co., 5229 Cass Ave., Detroit, Mich.

Waukesha Milk Cooler

No. 1835 (Dealer, Connecticut)—"We wish to know if you have ever published anything concerning the Waukesha milk cooler and just how long it has been on the market."

Answer: A news story, with photographs, concerning the Waukesha milk cooler manufactured by the Waukesha Motor Co. was published in the April 11, 1934, issue of ELECTRIC REFRIGERATION NEWS just after this product had been introduced to the market.

A full-page advertisement descriptive of the milk cooler and other refrigeration products introduced by the Waukesha Motor Co. at that time appeared in the April 18, 1934, issue of the NEWS.

Saturation by States

No. 1836 (Management Company, Illinois)—"We are interested in obtaining information relative to the saturation of electric refrigerators by states for the years of 1930, 1931, 1932, and 1933."

"We have been unable to find this information in our library and if it is available in your files, will appreciate very much your forwarding it to us."

"In case you do not have this information we will appreciate it if you can suggest the sources from which it can be obtained."

Answer: We have no data giving the saturation of electric refrigerators by states, and do not know where such data could be obtained. It might be possible to obtain estimates from public utility companies. A list of public utility companies that furnished "wired homes" and "potential market" information for the statistical section of the 1934 REFRIGERATION DIRECTORY is published starting on page 576 of the DIRECTORY.

Catalogs and Prices

No. 1837 (Exporter, New York)—"One of our most important Australian connections has requested us to secure catalogs and best prices for the following:

"Household refrigerator thermostatic controls.

"Refrigerator cabinet hardware.

"Pressure switches.

"Dried and annealed copper tube.

"Household cabinet interior lights.

"Thermostats.

"Single pole secondary circuit breakers from 1/2 to 1 hp. d.c. and a.c.

"Various types of refrigerator pipe fittings and valves.

"Door gasketing for refrigerator cabinets.

"Siphon seals for use on sulphur dioxide refrigerators.

"Refrigerator motors.

"Evaporators—all types.

"Automatic and thermostatic expansion valves for use in conjunction with both ammonia and sulphur dioxide mercoid controls.

"Forced draft convection coolers."

Answer: Manufacturers of the products which you name are listed in the 1934 REFRIGERATION DIRECTORY as follows:

Household refrigerator thermostatic controls, page 194; refrigerator cabinet hardware, page 172; pressure switches, page 212; dried and annealed copper tube, page 318; household cabinet interior lights, page 210; thermostats, page 192; circuit breakers, page 208; pipe fittings and valves, pages 214 and 321; door gaskets, page 170; seals for sulphur dioxide units, page 185; motors, page 210; evaporators, pages 186 and 202; automatic and thermostatic expansion valves, pages 321 and 323; forced draft convection coolers, page 201.

Manufacturers so listed can furnish prices and catalogs dealing with the products which you mention.

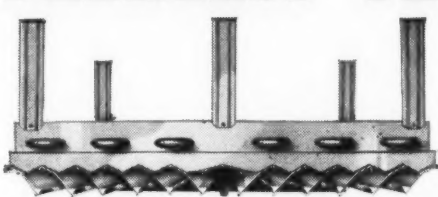
Musical Comedy Actress Added to Leonard's Show

CHICAGO—Maxine Brown, musical comedy actress who claims to be the original "Sweetheart of the Air," is now adding her pulchritude to the attractions at Leonard Refrigerator Co.'s World's Fair exhibit.

Miss Brown appears at hourly intervals on Leonard's "crystal stage" in the Electrical building, introducing the performances of Clarence Willard, "the man who grows" that take place in the air-conditioned Leonard theater.

Distinguished as the first stage star to forsake the footlights to become a regular salaried broadcaster, Miss Brown's vehicles included "Odds and Ends," "Buddies," "Floradora" revival, "The Right Girl," "Sue, Dear," "Moonlight," and "Plain Jane."

PEERLESS FLASH COOLER



The NEW Eye Appealing Method of Cooling Walk-In Refrigerators

STYLE & RESULTS

Fin Coils and Drip Pans Engineered in an Integral Unit—Saves Installation Cost and Operating Cost

PEERLESS ICE MACHINE CO. 515 W. 35th St. Chicago

COPELAND REPAIRS — REPLACEMENTS

REPAIRS	REPLACEMENT PARTS
B & B Household Controls.....\$2.50	Howell Special Capacitor Type
Penn Household Controls.....2.50	1/2 HP Refrigerator Motor.....\$11.00
Penn Commercial Controls.....4.50	Amer. Rad. Household Exp. Valve.....4.50
Amer. Rad. Household Exp. Valve.....2.50	Amer. Rad. Multiple Exp. Valve.....7.50
Amer. Rad. Multiple Exp. Valve.....3.50	Penn Commercial Controls \$8 & \$12.00
Apex Water Regulating Valve.....3.50	Iso Butane (Freezole) Per lb.....1.25
Penn Water Regulating Valve.....3.50	Methyl Chloride, Per lb......70

We also carry a complete stock of Gilmer Belts, Penn Water Regulating Valves, Glass Defrosting Trays, Lead and Fibre Gaskets, Etc. WRITE FOR PRICES.

Forty Eight Hour service on repairs, immediate shipment on replacements. All Repairs and Parts guaranteed to be free from defects in Workmanship, and Material for ONE YEAR.

REFRIGERATION SERVICE LABORATORIES, INC.

418-20 Rush Street

Chicago, Illinois.

THE TRADEMARK OF FOUR
PACE SETTERS
IN COIL EFFICIENCY

SUR-E-FEX Fin Coils
FAN-E-FEX Diffusing Units
HUM-E-FEX Non-Dehydrating Coils
AIR-E-FEX Air-Conditioning Units

SEND FOR NEW CATALOG DESCRIBING THESE SENSATIONAL DEVELOPMENTS

REFRIGERATION APPLIANCES, INC.
H. J. KRACKOWIZER, Pres.
1342 WEST LAKE ST., CHICAGO

KRAMER UNIT COOLERS
Manifolded for FREON
and for a greater than 20° differential between air and refrigerant

Send for New Literature

TRENTON AUTO RADIATOR WORKS
Main Offices and Factory, TRENTON, NEW JERSEY
NEW YORK, 210-212 West 65th Street
PITTSBURGH: 5114 Liberty Avenue

STARR FREEZE
OUTSTANDING PERFORMANCE
attested by satisfied users
— EVERYWHERE!

Sturdy Condensing Units from 80 to 2868 Lbs. I.M.E., and all other commercial refrigeration equipment—Wall type cases with machinery—A beautiful household line of modern, conservative styles—Write for full data.

THE STARR COMPANY
Cable "Starr" Richmond, Indiana (factory) Since 1927
1344 S. Flower St., Los Angeles, Calif.

SHAFTS . . . Crank and Eccentric
for Compressors, made to YOUR Specifications.

Manufacturers—Send Blue Prints for Quotations.

MODERN MACHINE WORKS, INC.
Specializing in the Manufacture of SHAFTS
156 N. Milwaukee Street Milwaukee, Wisconsin

Exports of Electric Refrigerators

June, 1934, Shipments Reported by the Bureau of Foreign and Domestic Commerce, Washington, D. C.

	Electric Household Refrigerators	Electric Commercial Refrigerators Up to 1 Ton	Parts for Electric Refrigerators
	Number	Value	Value
Austria	25	\$ 1,973	\$ 435
Belgium	125	10,714	12,099
Czechoslovakia	19	865	1,663
Denmark	...	...	4,800
Estonia	17	1,460	95
Finland	1,162	93,683	571
France	96	7,613	20,700
Germany	10	1,143	12,439
Gibraltar	22	1,837	13
Greece	4	323	236
Iceland	31	4,384	2
Irish Free State	276	26,053	791
Italy	7	507	6,665
Malta, Gozo, and Cyprus	177	15,057	9
Netherlands	117	9,576	9,897
Norway	6	690	3,948
Poland and Danzig	38	3,775	301
Portugal	528	49,257	985
Rumania	321	25,563	844
Spain	310	26,425	17,260
Sweden	1,432	113,591	8,142
Switzerland	25	2,608	15,072
United Kingdom	843	55,744	47,576
Yugoslavia	...	...	22
Canada	2	154	68,493
British Honduras	10	1,155	12
Costa Rica	3	468	60
Guatemala	1	114	5
Honduras	35	2,896	371
Nicaragua	376	36,416	72
Panama	19	2,163	492
Mexico	60	6,029	5,899
Newfoundland and Labrador	1	75	73
Bermudas	8	738	525
Jamaica	1	75	21
Trinidad and Tobago	8	771	10
Other British West Indies	8	528	194
Cuba	123	11,739	7
Dominican Republic	25	2,688	473
Netherlands West Indies	18	1,820	1
French West Indies	3	237	1,000
Haiti, Republic of	2	208	...
Virgin Islands of U. S.	222	7,200	26
Argentina	2	293	4,832
Bolivia	270	26,644	13,753
Brazil	1	14	3,679
Chile	48	5,954	2,252
Colombia	17	1,374	104
Ecuador	3	236	74
British Guiana	10	1,111	22
Surinam	16	1,213	4
Peru	1	96	54
Uruguay	61	5,935	72
Venezuela	113	9,977	346
Aden	18	1,882	67
British India	1	81	1,555
British Malaya	163	16,917	1
Ceylon	114	9,868	473
China	61	5,944	189
Netherlands East Indies	10	2,145	1
French Indo-China	...	...	1,520
Hong Kong	8	718	5,527
Japan	1	140	8,521
Kwantung	180	14,726	824
Palestine	20	2,418	...
Philippine Islands	...	...	1,796
Siam	10	1,062	...
Syria	55	5,154	761
Turkey	1	85	...
Other Asia	125	4,699	842
Australia	6	655	10,125
New Zealand	1	302	632
Belgian Congo	33	3,691	154
British East Africa	1,256	107,692	133
Union of South Africa	5	697	12,299
Other British South Africa	2	165	445
Gold Coast	1	191	77
Nigeria	8	862	35
Egypt	161	13,441	718
Algeria and Tunisia	10	753	1,664
Madagascar	2	158	86
Other French Africa	4	433	19
Italian Africa	78	7,953	...
Morocco	14	1,267	2,719
Mozambique	2	228	1,752
Other Portuguese Africa	29	2,799	108
Canary Islands	21	1,443	...
Other Spanish Africa	9,457	\$785,307	1,684
Total	301	\$ 33,082	\$147,793
Shipments to Hawaii	150	\$ 18,144	\$ 3,783
Puerto Rico	...	...	\$ 2,924